

Show your work and/or explain your thinking for each problem.

Set 1

1. Eric had a \$20.00 bill. He bought an action figure for \$4.98 and a baseball for \$8.49. The cashier gave him \$9.47 in change. Use estimation to decide whether Tyler received the correct amount of change
2. Mrs. Kennedy wants to save \$632 to buy a new washing machine. She saves \$70 each month. About how many total months will it take Mrs. Kennedy to save enough money to buy the washing machine?
3. Samantha and her mom are making sugar cookies for a family picnic. They need to make 9 dozen cookies for the picnic. What is the total number of cookies they need to bake? 1 dozen = 12 items
4. Jason is training for a marathon. After 6 hours, he has run 48 miles. If he is running at a constant speed, how far does he run in 1 hour?
5. A city in Nevada recycles 652 tons of aluminum cans each year. The total amount of waste recycled is 4 times the amount of aluminum cans recycled. What is the total number of tons of waste that are recycled each year?
6. The Pentagon is a building in Washington DC. The length of each side of the Pentagon is 921 feet. The building has 5 sides. What is the total number of feet in perimeter of the building?
7. The Lunch Box Restaurant served 324 lunches on Saturday. Each lunch sold for \$6. What was the total amount of sales on Saturday?
8. Ms. Johnson is packing basketballs to be mailed to local sports stores. She can fit 8 basketballs in each shipping box. How many basketballs can she mail if she has 491 boxes?
9. Your heart beats about 4200 times in an hour. About how many times does your heart beat each minute? 1 hour = 60 minutes
10. Which symbol makes the statement true? Choose from $<$, $>$, $=$.
 $53 + 18 \square 33 + 28$

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Set 2

1. A bag of pretzels cost \$1.79. Nancy wants to buy 5 bags. She has \$8. Does she have enough money to buy 5 bags? Explain your reasoning.
2. Miguel earned \$75 mowing yards last weekend. He mowed yards for 4 people and estimated he made about \$20 for each yard he mowed. Do you think Luther's estimation was accurate? Why or why not?
3. Ms. Thompson is shopping to buy apples for her class. She bought 8 bags of apples. Each bag contained 6 apples. What was the total number of apples Ms. Thompson bought?
4. Lucinda has a jar with 132 marbles. There are 12 different colors of marbles. The jar contains the same number of each color marble. How many of each color marble does the jar contain?
5. A bag of chocolate candy holds exactly 408 pieces. Eight friends plan to share the chocolate pieces equally. How many chocolate pieces should each friend receive?
6. A sports club is buying 9 new bicycles. The total cost of the bikes is \$2,142. What is the cost of each bike?
7. Mandy takes dance lessons. After 3 weeks, she has practiced her dancing for 810 minutes. She practices the same number of minutes each week. How many minutes does she practice each week?
8. Tom collects stamps. His stamp collection contains 312 stamps from 6 different countries. He has the same number of stamps for each country. How many stamps does he have from each country?
9. Students are selling concert tickets. Their goal is to sell 180 tickets. Last week they sold 43 tickets. This week they sold 79 tickets. Use the expression to find out how many more tickets they need to sell to make their goal. $180 - (43 + 79)$
10. Draw a rectangle that has an area of 24 square units and a perimeter of 20 square units.

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Set 3

1. Tom has to take out the trash every day at his house. There are 7 trash cans at his house. It takes Tom about 14 seconds to empty each trash can into the large trash can in the garage. About how many seconds does it take for Tom to empty the trash cans each day?
2. Kathy has three chores she must do every morning. She spends about 35 seconds making her bed, 48 seconds putting away her breakfast dishes and 65 seconds feeding the dog. About how many seconds will she spend completing her chores at the end of a seven day week?
3. Kwan washes dishes three nights a week, empties trash cans twice a week, and walks the dog the other two nights. If his aunt stops by to visit, what is the probability that Kwan is walking the dog?
4. On Tuesday Kwan's family had friends over for dinner. There were 9 people altogether and they ate 36 pieces of chicken. How many pieces of chicken did each person eat?
5. Timothy's front yard is 12 meters long by 8 meters wide. How many square meters is this?
6. If Timothy mows 16 square meters in one minute, how many minutes does it take him to mow the lawn?
7. Maria watched her sister for 2 hours on Monday. On Tuesday she watched her for 1 hour more than on Monday and on Wednesday she watched her for an additional 2 hours. How many hours did Maria watch her sister altogether?
8. Each van at Keys Academy can hold 12 passengers. How many passengers can 2 vans hold? How many passengers can 4 vans hold? What about 8 vans?
9. For the next six problems write a number sentence that could be used to solve each problem, then solve it.
Thirty-eight books on a shelf, there are five shelves. How many books in all?
There are forty-five books on five shelves. How many books on each shelf?
Eight hot dogs in each package, there are eight packages. How many hotdogs altogether?
There are thirty-two hotdog buns in four packages. How many buns in each package?
Twelve park rangers in a boat and four boats. How many park rangers in all?
Sixty park rangers in twelve cars. How many park rangers in each car?
10. Would you rather work for \$20 per day for seven days or earn \$2.00 the first day and then have your salary double each day for seven days?

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Set 4

1. Washington Elementary School has 3 classes for each grade level, Kindergarten through fifth grade. There are about 27 students in each class. About how many students attend Washington Elementary School?
2. For a math club party the teacher bought three boxes of cookies. The boxes cost \$2.98, \$3.35 and \$2.75. About how much money did the three boxes of cookies cost altogether?
3. The library received 11 boxes of new books. Each box holds 12 books. How many new books did the library receive?
4. The science club won twenty-four pumpkins at the Fall Carnival. That is six times as many pumpkins as the English club won. How many did the English club win?
5. Mr. Barber's fifth grade class needs to sell 630 raffle tickets. They have already sold 345 to students and 178 to parents. How many more tickets do they need to sell?
6. Rachel entered four numbers less than 20 into her calculator. She remembered the first and third but forgot the second and fourth numbers. The outcome was 16.
Name a pair of numbers that could have been the second and fourth numbers.
Name another pair of numbers that Rachel could have used.

$$\boxed{18} + \boxed{} - \boxed{9} + \boxed{} = 16$$

7. Robert won 8 bags of Super Sour Lollipops at the Fall Carnival. Each bag holds 45 lollipops. How many Super Sour Lollipops did Robert win?
8. The Fifth Street School choir is taking a trip to a concert. Parents have volunteered to drive them to the concert. There are 37 choir members and 9 parent volunteers. Each parent can drive 4 choir members. How many more parent volunteers do they need?
9. The Beanbag Toss was very popular at the school carnival. Each student got to throw beanbags until five beanbags went through the holes. The five holes had point values of 15, 12, 7, 5, or 1 point. The following scores were reported by five students:

Students	1	2	3	4	5
Points	40	52	30	35	28

Two students made errors in adding up their scores. Which two students made errors?

10. The school made \$2700.00 on the school carnival. The fifth grade made \$600, the fourth grade made double the fifth grades amount and the third grade made half of what the fifth grade did. The rest was split evenly among Kindergarten, first grade, and second grade. How much did each grade earn? Show work or explain thinking.

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Set 5

1. A basketball announcer states that there are about 5,000 people at a basketball game. If the announcer rounded to the nearest thousand, what is the greatest number of people that could be at the game?

4,999 5,099 4,599 5,499

2. Bryanna is hiding some coins. Use the following clues to determine what coins she is hiding?

There are 4 coins.

The coins total \$0.32.

There are three types of coins.

3. Angel can get three games at Paul's Playhouse for \$36.00. How much does each game cost?

4. A medium pizza can be cut into 8 slices. Mama's Pizza sells 26 medium pizzas one night. How many pieces of pizza were in the 26 medium pizzas?

5. An extra large pizza can be cut into 16 slices. Mama's Pizza sells 30 extra large pizzas one night. How many pieces of pizza were in the 20 extra large pizzas?

6. Mr. Garcia's class is planting a garden. The rectangular garden is 32 feet long and 28 feet wide. What is the area of the garden in square feet?

7. Jonathan uses a stopwatch to time how long it takes his friends to jog around the field. The times are as follows:

Leslie	4.27 minutes
Mariah	5.09 minutes
Juan	5 minutes
Estello	5.9 minutes

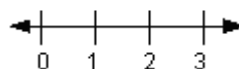
Whose time was the fastest?

Whose time was the slowest?

8. During the election Carl received $\frac{1}{5}$ of the votes, Flora received $\frac{1}{4}$ of the votes. Which of the two candidates received the most votes? Explain your thinking.

9. Ali takes \$11.50 to the video arcade. He plays 9 games that cost \$.50 each. How much money will he have left?

10. Approximately where would $\frac{2}{3}$ plus $\frac{1}{8}$ be on a number line? Explain your thinking.



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Set 6

1. Tara has 16 cookies. She takes two cookies for herself. Then Tara divides the remaining cookies among three friends. Which expression shows how Tara shares her cookies?

Explain.

$$(16 \div 3) - 2 \quad (16 + 2) \div 3 \quad (16 - 2) \div 3 \quad (16 - 2) + 3$$

2. Parentheses can help show the order of carrying out operations. Insert parentheses to make each number sentence true.

$$10 + 5 \times 8 - 8 = 10$$

$$10 + 5 \times 8 - 8 = 112$$

$$10 + 5 \times 8 - 8 = 42$$

3. Your teacher told 10 students that they could share a bag of candy evenly among themselves. There were 160 pieces of candy in the bag. How many pieces of candy did each student get?
4. James has 39 baseball cards. His friend Rebecca has 20 times as many cards. How many baseball cards does Rebecca have?
5. Use the digits 0 through 9 to fill in the blanks.

$$\begin{array}{r} \square \square \square \\ \times \quad \quad 8 \\ \hline 2536 \end{array}$$

6. Benji has 217 action hero trading cards. He wants to share them equally among 6 friends. How many will each of his friends get?
7. The Shoots the Rapids water ride has cars that hold 12 people each. 95 people are in line for the ride. How many cars will they need to hold all 95 people?
8. Hamid wants to buy 3 notebooks; each notebook cost \$2.89 including tax. Hamid only has dollar bills and no coins. How many dollar bills will Hamid need to buy the notebooks?
9. Begin with a one digit number, multiply by three, add eight, divide by two and subtract six. You will end up with the same number you started with. What is the number? Show your work and explain your thinking.
10. Dylan baked brownies and gave half to his friend Jason. Then Dylan ate three of the remaining brownies and gave the last five to his little sister. How many brownies did Dylan bake?

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Set 7

1. At the movie theater Saturday afternoon, all the seats were filled. April counted 61 rows with 28 people in each row. About how many people were in the theater?
2. Nancy's teacher has a total of 80 colored pencils. There are an equal number of 8 different colors. How many pencils of each color does she have?
3. Angie sews t-shirts in a factory. She sews 125 t-shirts daily. At the end of a five-day week, how many t-shirts has she sewn?
4. A baker made 673 muffins. Each muffin costs 75 cents. How many cents will he collect if he sells all the muffins?
4. Maria's older sister makes \$235 each week. At the end of 14 weeks, how much money does her sister make?
6. Three friends each have part of their candy bar left. Sam has $\frac{4}{6}$ of a candy bar. Bob has $\frac{1}{3}$ of a bar. Troy has $\frac{9}{12}$ of a candy bar. Who has the largest piece left?
7. The drawings show the part of an hour for 3 people to walk home. Who takes the most time walking home?

Tony $\frac{3}{4}$ of an hour



Jordan $\frac{1}{2}$ of an hour



Bryan $\frac{5}{8}$ of an hour



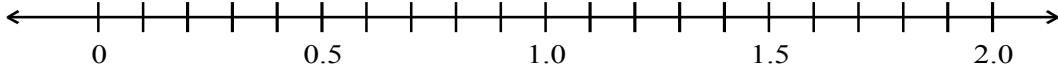
8. Mr. Brown is buying a sheet of plywood. They come in 3 different thicknesses: .12 inch, .62 inch, and .37 inch. He wants to buy the thickest sheet of plywood. Which sheet will he choose? Explain your answer.
9. Joey had \$13.56. He bought an action figure for \$2.55. How much money did he have left?
10. Which answer makes the inequality true? $18 + 17 < b$. {25, 35}

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Set 8

1. Marty has \$20.00. He is buying a CD. Does he have enough money to buy a paperback book also? All prices include tax.

Media Store Sale Prices	
Paperback books	\$1.95
Hardcover books	\$5.95
T-shirts	\$7.95
Caps/Hats	\$7.95
CDs	\$12.95

2. A tour company collected \$72 for a tour of Red Rock Canyon. The cost of the tour for each person is \$9. How many people went on the tour?
3. At the end of 61 trips, a fishing company caught 23,180 pounds of fish. How many pounds were caught at each trip (the same amount was caught each time)?
4. Tamara's mom paid \$3,900 rent in 6 months. What was the monthly cost for rent?
5. A teacher divided a large container of tiles into 12-ounce containers for his students. There were no tiles left in the large container. There are 35 students in the class. How many ounces of tiles were in the large?
6. Order the decimals from least to greatest. Then place them on a number line.
1.5, 0.3, 0.8, 1.9, 1.2


A number line is shown with arrows at both ends. Major tick marks are labeled 0, 0.5, 1.0, 1.5, and 2.0. There are 10 minor tick marks between each major tick mark, representing increments of 0.1.
7. The height of Mr. Peterson's desk is 30.62 inches. The height of Mr. Locke's desk is 30.67 inches. Whose desk is taller? Explain.
8. Maria and her two friends have sandwiches for lunch. Maria ate $\frac{7}{16}$ of her sandwich. Sarah ate $\frac{3}{4}$ of her sandwich. Tanya ate $\frac{4}{8}$ of her sandwich. Who ate the most? Who ate the least? Explain or show your work.
9. Suzanne bought a pencil for \$.25, an eraser for \$.15, a pen for \$2.35, and a notebook for \$4.75. She gave the cashier \$20.00. How much change did she get back?
10. Alicia needs to be home by 2:30 pm. It takes 2 hours and 15 minutes to drive home. What time does she need to leave to be home on time?

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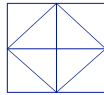
Set 9

1. Karen ate $\frac{1}{8}$ of a pie, her brother Wayne ate $\frac{2}{8}$ of the pie. How much did they eat altogether?
2. Marshmallow Treats come in a bag of 250. A group of 12 students decide to split the bag equally. How many Marshmallow Treats does each student get?
3. Tanya calculated her gas mileage for four weeks. The table below shows the weekly results.

Week Number	1	2	3	4	5	6
Miles per Gallon	27	28	25	29	26	25

Approximately how many miles per gallon is Tanya getting? If Tanya has a 16 gallon tank, about how many miles can she drive each week before needing to refill her tank?

4. How many small triangles need to be shaded to cover one-fourth of the figure below?



5. David spent $\frac{2}{4}$ of his \$10.00 on pens and pencils, $\frac{2}{5}$ of his \$10.00 on a spiral notebook, and the remaining $\frac{1}{10}$ of his money he spent on glue. On which item did he spend the most money?
6. Ms. Farmer spent \$7.00 on a movie, \$3.50 on popcorn, and \$1.75 on a soda. How much money did she spend altogether?
7. Solita walked $\frac{4}{7}$ of a mile on Tuesday and $\frac{2}{7}$ of a mile on Thursday. How far did she walk on both days?
8. What are the next two numbers in the pattern below? What is the rule?
3, 9, 27, 81, ...
9. The Rosen family has been very busy and they have not done laundry for a week. Their dirty laundry pile consists of 285 items of clothing. They can put an average of 23 items in each load of laundry. How many loads will it take to wash all their dirty clothes?
10. The three fifth grade classrooms at Prime Elementary School have computers. Room A has three times as many computers as Room B. Room B has 5 less than Room C. Room C has 15 computers. How many computers does each of the three classrooms have?

Show your work and/or explain your thinking for each problem.

Set 10

1. Joylin lives on a farm. Her mother planted 22 rows of tomato plants with 8 plants in each row. About how many tomato plants did she plant?
2. A museum charges \$10 admission for students. 11 students went to the museum. What was the total cost for these students to be admitted to the museum?
3. A book publisher mails 25 cartons of books to each of its 640 customers. What is the total number of cartons mailed?
4. The school chorus is going to a concert across town. There are 102 people who will be traveling on school busses. Each bus carries 31 students and is completely filled before the next bus is loaded with students. How many busses will be needed to take every chorus member?
5. Karen is making a baby quilt. She bought 3 different colors of material. She bought $\frac{5}{8}$ yard of green, $\frac{5}{8}$ yard of yellow, and $\frac{3}{8}$ yards white. How many total yards did she buy?
6. Eduardo has 25 fish in his aquarium. He decides to give $\frac{1}{5}$ of them to his brother and another $\frac{2}{5}$ of the fish to his friend. What fractional part of his 25 fish is he giving away?
7. Dan's math book is 1.9 inches thick. His science book is 1.4 inches thick. How thick are both books together?
8. Four girls ran a relay. Their times are shown.

Name	Time
Juanita	27.6 seconds
Heather	26.3 seconds
Alice	28.1 seconds
Carla	29.0 seconds

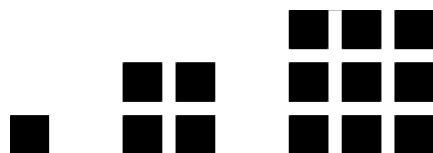
What was their total time in seconds?

9. Victor's dad is buying 8 tickets for a soccer game. The tickets cost \$13.00 each. Victor's dad pays \$120. How much money will he get back?

Show your work and/or explain your thinking for each problem.

Set 10 continued

10. Tim is making a pattern using shaded square tiles.

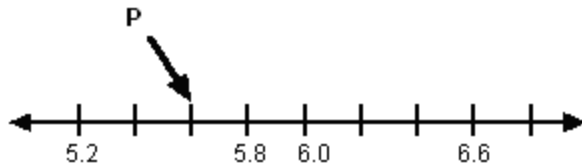


If the pattern continues, how many shaded square tile will there be in the 4th arrangement?

Show your work and/or explain your thinking for each problem.

Set 11

1. What is the value of point P on the number line shown?



2. The Science Club is selling fruit bars to raise money for a field trip. Each case of fruit bars holds 12 boxes. Each box holds 12 bars. How many fruit bars are there in 5 cases?
3. The cafeteria can hold 364 students. Each cafeteria table seats 14 students. How many cafeteria tables are there?
4. A box of candy has 11 chocolates. A shipping carton has 8 boxes. How many chocolates are in each shipping carton?
5. Frank received 4 posters to hang in his room for his birthday. He can only hang 2 of the posters at a time. How many different ways could he pick 2 of the posters to hang in his room?
6. During the 2004 Olympic Games in Athens, Greece the winning time for the Women's 100 meter was 10.93 seconds. The twentieth place was 11.14 seconds. What is the difference in seconds between the first place and the twentieth place?
7. **Pick 2 digits from each set listed** to create 2 two-digit numbers. The two-digit numbers you create should result in the smallest possible product when multiplied together.
Set One 9, 1, 6, 5, 8, 7
Set Two 3, 5, 7, 2, 0, 4
8. A student wants to buy 4 drinks at \$1.20 each and 4 bags of popcorn at \$1.75 each. Will \$10.00 be enough?
9. Brice lives $\frac{7}{10}$ of a mile from school. Jace lives $\frac{1}{10}$ of a mile from the same school. How much closer does Jace live than Brice?
10. Larissa went to a dog show. There were dogs and judges in the ring. Larissa counted 22 heads and 72 feet in the ring. How many people and how many dogs were in the ring?

Show your work and/or explain your thinking for each problem.

Set 12

1. Mr. O'Hara is having his house painted. The painter is charging \$8.25 per hour. It will take him about 59 hours to paint the house. About how much will Mr. O'Hara pay to have his house painted?
2. A box of candy has 11 chocolates. A shipping carton has 8 boxes. How many chocolates are in each shipping carton?
3. Your school year is 185 days long. If you go to school everyday for 13 years, how many days will you attend?
4. John's family took a trip during the summer. They traveled for 14 days and went a distance for 2,534 miles. How many miles did they average each day?
5. Ann is baking cupcakes. The recipe uses $\frac{5}{8}$ cup of sugar. Ann only has $\frac{2}{8}$ of a cup. How much more sugar does Ann need?
6. Almost one half of the students in Mr. Edgar's fifth grade class are going to art. Which of the fractions below shows the fraction of Mr. Edgar's students who are going to art. Explain.

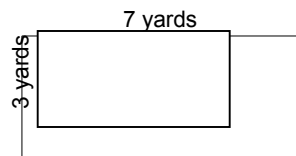
$$\frac{4}{7}$$

$$\frac{1}{3}$$

$$\frac{5}{12}$$

$$\frac{5}{6}$$

7. Mario's pencil is $5\frac{3}{4}$ inches long. Toby's pencil is $4\frac{1}{4}$ inches long. How much longer is Mario's pencil?
8. On the weekend it snowed on Mt. Charleston. On Saturday, it snowed 4.3 inches. On Sunday, it snowed 9.7 inches. How much more snow fell on Sunday?
9. Sharlene and Nicole ran the 50-yard dash at a track meet after school. Sharlene ran the race in 32.9 seconds. Nicole ran the race in 27.6 seconds. How much faster did Nicole run than Sharlene?
10. The drawing shows a dog pen that measures 3 yards by 7 yards. Melanie needs to replace the fencing for the pen. Will she need 20 or 21 yards of fencing to enclose the pen?



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Set 13

1. Derek put toy cars on a shelf. The top row has 3 cars. The second row has 7 cars. The third row has 11 cars. How many cars will be on the fifth row if the pattern continues?
2. Braxton has a jar with 1200 marbles in it. He gives $\frac{3}{10}$ of his marbles to his friend Paul and another $\frac{2}{10}$ to his friend Jeff. What fraction of his marbles did he give away?

3. Randy is school shopping. Below is a list of the items he wants to buy and the actual cost of the items.

Fill in column (b) by rounding the actual prices to the nearest dollar.

Fill in column (c) by rounding the actual price up to the next highest dollar.

Find the sums of columns (a), (b), and (c) by adding.

Which estimate is closer to the actual cost?

Which estimate should he use to estimate the amount of money he should take shopping?

Item	Actual Price (a)	Rounded to the nearest dollar (b)	Rounded to the next highest dollar [c]
Soda	\$1.15		
Book	\$5.75		
CD	\$13.45		
Shoes	\$49.50		
	Sum	Sum	Sum

4. Kerry, Janet, and Mitch played a computer game. Kerry scored 312 points and Janet scored 565. The three players together scored 1432 points. How many points did Mitch score?
5. The students in Ms. Callahan's math class have cats, dogs, and lizards as pets. There are twice as many cats as dogs and one-fourth as many lizards as cats. Create a bar graph that shows the possible number of cats, dogs, and lizards the students have. Be sure to label your axes and include a title.
6. Julie has 15 coins in her pocket. The coins add up to **\$2.18**. She has the same number of pennies as she does dimes. She has 5 more quarters than she does nickels. Julie has 3 pennies. How many nickels, dimes, and quarters does she have?
7. Dylan bought a pie for pi day at school. He gave $\frac{1}{3}$ to his teacher. The pie was cut into 6 pieces. How many pieces did Dylan give his teacher?
8. If the number pattern below continues what will the next three numbers be? Describe the rule. 3, 7, 6, 10, 9, 13, 12,...
9. Roger wants to buy a video game that is on sale for \$26.00. He has \$21.38 saved so far. How much more money does Roger need to buy the game?
10. Name three fractions that are equivalent to the shaded portion of the rectangle shown below.



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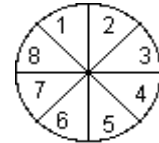
Set 14

1. Use the digits 0 through 9 to fill in the blanks so that the difference of the two numbers is 921. Each digit may only be used one time.

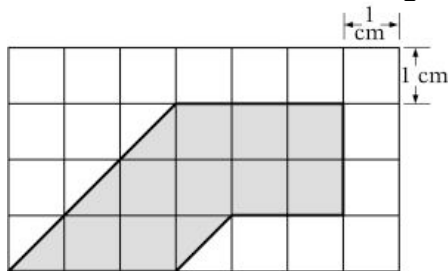
$$\begin{array}{r} \square \square \square \\ - \square \square \\ \hline 921 \end{array}$$

2. One pizza was cut into 8 equal slices. Judy ate two of the slices. Another pizza of the same size was cut into 12 slices. Alicia ate 3 slices of the second pizza. Who ate more pizza?

3. Given the spinner shown at right what is the probability of spinning a multiple of 3? Write your answer as a fraction. If the spinner is spun 36 times, how many times would you expect that a multiple of 3 would show up?



4. What is the area of the shaded region in the following figure?



5. 15 classes raised \$3495.00 for a field trip. How much money does each class **get** if the money is shared equally?
6. Ms. Mac, the math teacher, thought the average number of students in her classes was larger than the average number of students in Ms. Taylor's class. Was she correct? Explain.

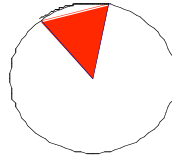
Number of Students in Ms. Mac's Math Classes	Number of Students in Ms. Taylor's Math Classes
32	33
35	39
36	25
30	29
28	34

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Set 14 continued

7. A gardener is planting a vegetable garden as shown. The gardener has planted 55 plants in the shaded area. What is the best estimate of the total number of plants that can be planted in the entire garden?

- 175 to 250 plants
- 250 to 325 plants
- 325 to 400 plants
- 400 to 475 plants

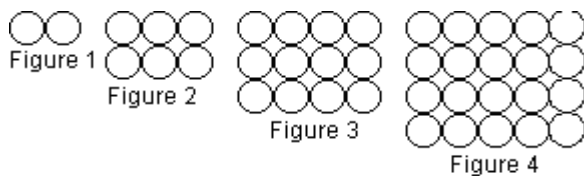


8. A store sells 168 video games a week. How many video games will it sell in 35 weeks?
9. The table below shows the temperature on five winter mornings.

Day	Temperature at 6:00 AM
Wednesday	-6° C
Thursday	-12° C
Friday	-3° C
Saturday	-18° C
Sunday	0° C

Which day had the coldest morning?

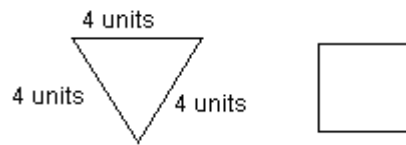
10. The first four arrangements of a geometric pattern are shown below. How many circles will there be in the 5th and the 8th arrangements? Explain your thinking.



Show your work and/or explain your thinking for each problem.

Set 15

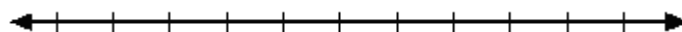
1. The triangle and the square both have the same perimeter. What is the length of a side of the square?



2. In Alex's class $\frac{6}{15}$ of the students have three or more vowels in their first names. $\frac{7}{30}$ of the students have **exactly** two vowels in their names. Are there more students with **exactly** two vowels or more students with three or more vowels?
3. Which of the following does NOT equal 2,456?
2 thousand, 456 ones
24 hundreds, 5 tens, 6 ones
2 thousand, 45 tens, 6 ones
245 hundreds, 6 ones
4. Chen bought a model car for \$4.59, a can of paint for \$2.25, and a tube of glue for \$1.45. There was no sales tax. He paid with a \$10.00 bill. How much change will he get?
5. The fraction $\frac{7}{?}$ is a little more than one. What could the denominator be?
6. I am a number. When you switch the digit in the ten thousands place with the digit in the hundreds place you get 36,452. What number am I?
7. Clark's Own Popcorn boasts that 9 out of every 10 kernels of popcorn actually pop. Based on this claim, how many kernels do you need to pop to get 55 pieces of popped corn?
8. Daily temperatures for one week in January are shown in the table below. Find the **mean** temperature for the week. Do you think the mean is a good description of the temperature that week?

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
35°	38°	33°	40°	78°	76°	50°

9. Put the following numbers in order from least to greatest and then plot them on the number line shown. -3, 0, 1, -1, 3, -5, 2



10. Three boys ordered a pizza. One boy ate $\frac{2}{8}$ of the pizza, another boy ate $\frac{3}{8}$, and the last boy ate another $\frac{2}{8}$. What fraction of the pizza was leftover?

Show your work and/or explain your thinking for each problem.

Set 16

1. The table below shows the cost of sandwiches. What is the cost of one sandwich? If the pattern continues what will the cost of 5 sandwiches be?

Number of Sandwiches	Total Cost
1	\$
2	\$2.50
3	\$3.75
4	\$5.00
5	\$

2. A shoe store is moving to a new location. They must put all their shoes into boxes to move them. They can fit 14 pairs of shoes into each larger box. There are 1385 pairs of shoes altogether. About how many larger boxes do they need to move all the shoes?
3. When using order of operations with no grouping symbols (parenthesis) the following number sentence is true $3 + 9 \div 3 \times 6 - 4 = 17$. Where would you put grouping symbols to make the following number sentence true? $3 + 9 \div 3 \times 6 - 4 = 9$
4. At a Math Club party three equal size pizzas were ordered. Each pizza was cut into 8 equal pieces. Each student at the party ate two slices and there was one-fourth of a pizza left over. How many students were at the party?
5. Tammy wonders if the number $12 \times (6+9)$ is the same as $(12 \times 6) + (12 \times 9)$. Help Tammy figure it out.
6. From the list below choose which type of graph you might use to display the following data. Explain why you believe that type of graph is a good choice to display the data. **bar graph circle graph line plotline graph**
Students' height
Favorite pet
Change in temperature over time
7. Alaska receives an average of 53.15 inches of rainfall per year. Hawaii receives an average of 23.47 inches per year. How many more inches of rainfall does Alaska receive each year than Hawaii?
8. Rounded to the nearest whole number, Nevada receives an average of 8 inches of rainfall per year. What is the least possible amount of rainfall Nevada could receive?
9. Which unit of measure would you use to describe the weight of each of a penny? liter, gram, pound, or meter? Explain your choice.
10. The African Elephant can weigh up to 7.5 tons. 1 ton equals 2,000 pounds. What is the **maximum** weight of the elephant in pounds?

Show your work and/or explain your thinking for each problem.

Set 17

1. The two number sentences shown are true.

$$\square + \square = 16$$

$$\triangle + \square = 25$$

What values for \triangle and \square will make both number sentences true?

2. Which of the following would you use to describe the length of a key: 6 centimeters, 6 inches, 6 meters, or 6 millimeters? Explain your choice.
3. Ms. Lewis is measuring the height of every student in her class. Which unit of measure would be the most precise: inches, feet, or yards? Explain your reasoning.
4. Martha wants to determine how much water it will take to fill her bathtub. Which would be the most appropriate tool for her to use: a tablespoon, a cup, a gallon **bottle**? Explain.
5. Which unit would give the most precise measurement of a dog: ounces, pounds, tons? Explain.
6. Tia and 4 of her friends went golfing. Their scores were: -4, 1, -2, -5, and 3. In golf the lowest score wins. Order these numbers from least to greatest and place them on a number line.
7. Brandon is the running back for his football team. He had 4 carries with these results in yards gained or lost: -3, 17, -12, 5. List his yards gained/lost from lowest to highest, and then put them on a number line.
8. Temperatures during the week were recorded each morning. The following list shows the degrees of change each of the 5 days. 5, -2, 3, -3, 4. Record these numbers from least to greatest and place them on a number line.
9. Rick and his 2 brothers saw a movie that cost \$6 a piece. The 3 brothers spent \$3 each on snacks. They had \$35 to spend. How much money was left?
10. Order the numbers from least to greatest. 2.51, 3.60, 2.57, 3.61

Show your work and/or explain your thinking for each problem.

Set 18

1. Jim caught 5 fish. Which measure would show the most precise weight: milligrams, grams, or kilograms? Explain.
2. Sheila is buying material to make curtains for her bedroom window. Will she measure her window in inches, yards, or miles? Explain.
3. John is painting his house. Which measurement unit would be most appropriate to use when he buys the paint: pints, quarts, or gallons? Explain.
4. Bob is running a marathon. Which is the most precise measure of time: days, hours, minutes, seconds? Explain.
5. Naomi is measuring the length of her foot. Which is the most precise measure of length: millimeters, centimeters, meters? Explain.
6. Laura watched the elevator change floors in a hotel. It went up 5 floors, then down 3, then down 4, then up 8. Write the changes as integers. Put the integers in order from least to greatest, and then put the integers on a number line.
7. Mr. Hooper bought stocks in the stock market. He kept track of the changes in the price of his stock for 7 days in a row. Place these on a number line: +11, -8, -12, +7, +5, -2, -3
8. Jamie deposited money in and withdrew money from her bank account. The changes for a week were: +12, -11, -15, +6, -8. Place these integers on a number line.
9. A hiking club is taking a 14-day trip. There are 9 members in the club. If each member eats 3 pounds of food a day, how many pounds of food would the club need for the entire trip?
10. Kim's uncle celebrated his 45th birthday 4 years ago. How old is her uncle now?

Show your work and/or explain your thinking for each problem.

Set 19

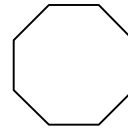
1. The first term is 3 and the rule is “multiply by 7.” What are the next 3 terms of the sequence?
2. The rule is “add 12.” The first term is 9. What are the next 3 terms?
3. The first term is 15. The rule is “subtract 4.” What are the next 4 terms?
4. Draw a square. A square is classified as a regular quadrilateral. What observations can you make about the sides? The angles?
5. How many faces does a rectangular prism have?
6. A polygon has 3 sides and 3 equal angles. What type of polygon is this?
7. Define diameter.
8. Give the definition of a pentagon. Describe it by its sides and vertices.
9. The Farmer’s Market sold 52 pounds of apples last week. They sold 66 pounds of apples and 27 pounds of peaches this week. How many pounds of fruit did they sell in both weeks?
10. Mark worked at the library and earned \$8.47 per hour. If he works 10 hours, estimate the amount of money he earned.

Show your work and/or explain your thinking for each problem.

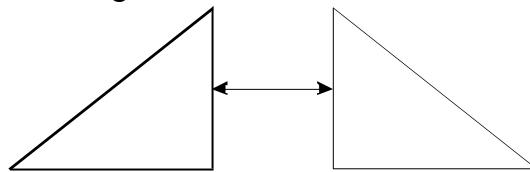
Set 20

1. The rule is “multiply by 5.” The first term is 15. Find the next 2 terms.
2. The first term is 144. The rule is “divide by 2.” What are the next 3 terms?
3. The rule is “subtract 10.” The first term is 794. What are the next 3 terms?

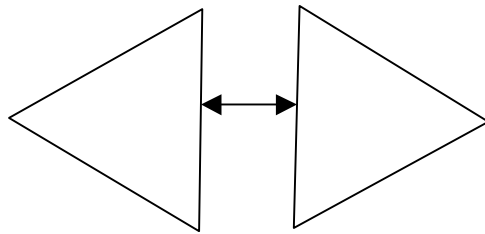
4. Polygons are created when a line segment is drawn from one vertex to **each** of the other **non-consecutive** vertices in the octagon. Describe the polygons created. How many are there?



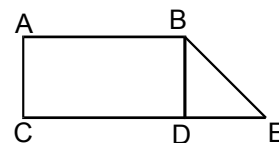
5. The two **congruent** triangles are combined. Describe the polygon that is formed?



6. A rectangle is divided by a diagonal into 2 polygons. Describe the polygons.
7. Two equilateral triangles are joined. Describe the new polygon.



8. Describe what happens when the line segment from point B to point D is removed. What is the polygon?

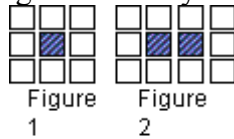


9. Jennifer’s dog Sampson weighs 18 pounds. A dog crate says it can hold dogs up to 300 ounces. Is Sampson too heavy for the dog crate? (16 ounces = 1 pound)
10. A car gets 21 miles for every gallon. How many miles can it travel on 12 gallons?

Show your work and/or explain your thinking for each problem.

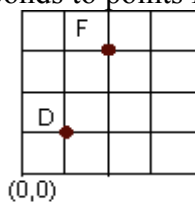
Set 21

1. Ari is building a garden. He wants it to be long and narrow with a brick border. The first figure shows how 8 bricks would surround 1 square foot of garden. The second figure shows how 10 bricks would surround 2 square feet of garden. Ari wants to enclose a garden that is 37 feet long. How many bricks will he need?



When he is done with his garden Ari still has 25 bricks. How much longer could Ari have made his garden?

2. Use the following clues to create a schedule for the class field trip to the museum and then answer a question. Clues:
The trip to the museum lasted 6.5 hours from the time the busses left the school until they arrived back at the school.
The busses will leave the school at 8:30 am.
The trip to the museum takes 20 minutes. The trip back takes 30 minutes due to traffic.
The museum tour started 10 minutes after the busses arrive at the museum. The tour lasts for 2.5 hours.
Lunch is scheduled to begin three hours after the busses leave school. Lunch lasts 45 minutes.
After the tour and lunch the students could explore the museum in small groups.
3. There are 6 fifth graders and 3 fourth graders on the pep squad. Everyone's name is put in a hat and the captain is chosen by picking one name. What are the chances that the captain will be a fifth grader?
4. Macauley's dad decided to take his soccer team out for ice-cream after practice. Each of the 10 players ordered an ice-cream for \$2.79. Macauley's dad didn't order anything. What was the total bill for the ice-cream?
5. On the coordinate plane shown below there are 2 points that have been plotted. Name the ordered pair that corresponds to points D and F.



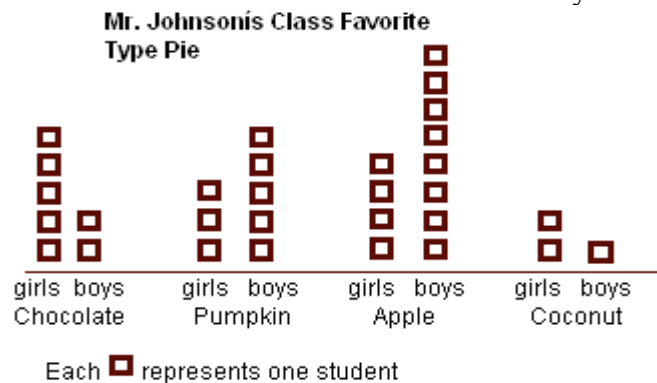
Show your work and/or explain your thinking for each problem.

Set 21 continued

6. For each pair of measurements decide which measurement is more precise? Explain.
 21 cm or 210 mm
 78 m or 78 cm
 5 cm or 5.0 cm

7. Shaquille's bedroom is 4 yards 2 feet wide. John's bedroom is 13 feet wide. Whose bedroom is wider?

8. The students in Mr. Johnson's fifth grade class were asked what their favorite type of pie is. Every student in the class voted. The results of the survey are shown below.



How many students are in Mr. Johnson's class?
 What type of pie did most of the students like?

9. Carol entered her frog in a jumping contest. On the first jump the frog jumped 51 inches. On the second jump it jumped 4 feet 6 inches. Which jump was the longest?

10. Explain why each of the models below is equal to $\frac{2}{3}$.



Show your work and/or explain your thinking for each problem.

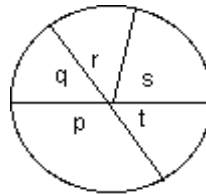
Set 22


1. Maria and Rebecca were measuring their wrists for a bracelet. Maria said her wrist was 14 cm around and Rebecca said hers was 14.0 cm. Maria said they were the same but Rebecca said hers was more precise. Who is correct? Explain.
2. Dakota is playing darts. He scored 65 points with 6 shots. Which of the following number sentences are possible results of Jay's 6 shots?
 $2 \times 15 + 3 \times 10 + 5$
 $15 + 4 \times 10 + 2 \times 5$
 $25 + 2 \times 10 + 3 \times 5$
 $3 \times 5 + 2 \times 25 + 5$

3. Leo has taken 6 math tests this semester.

85	76	95	90	82	79	76
----	----	----	----	----	----	----

What is the median of Leo's math test scores?
What is the **mode** of Leo's math test scores?
Do you think the median or the mode best describes Leo's scores on the 6 tests? Explain.
4. Which angle in the diagram appears to be obtuse?

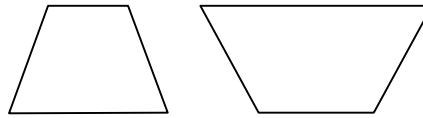


5. The director of the local math bee wants to charge a small fee to cover expenses. She estimates that it will cost about \$270 to run the contest. There are about 60 people registered. About how much should she charge each contestant?
6. One side of an equilateral triangle is 6 centimeters. What is the perimeter of the triangle?
7. Mr. Ball the librarian is buying new books for the library. He has chosen 32 new books. Each book costs \$5.95. How much will the new books cost all together?
8. The length of a rectangle is twice as long as its width. The width is 4 inches. What is the perimeter of the rectangle?
9. When the figure below is cut out and folded up what is its most specific term for the figure?
10. Name three capital letters (A, B, C,...) that have exactly two parallel lines.

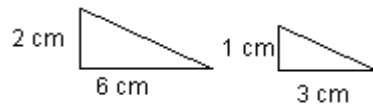
Show your work and/or explain your thinking for each problem.

Set 23

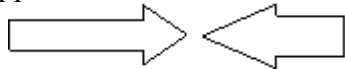
1. Do the two figures shown, **appear to be** congruent?



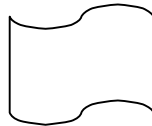
2. Are the two triangles similar?



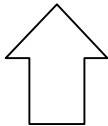
3. Do the figures appear **to be** similar?



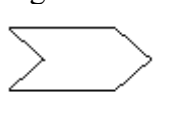
4. Translate (slide) the following figure to the left. Sketch the original figure and the image.



5. Rotate (turn) the following figure 90°. Describe the original figure and the image.



6. Reflect (flip) the following figure across the line. Describe the original figure and the image.

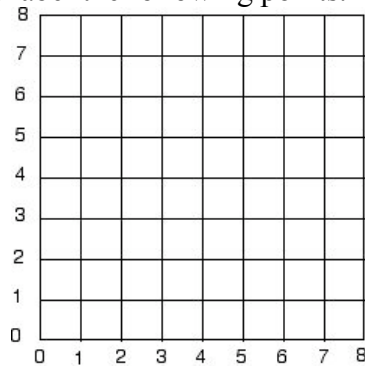


7. A square has a side length of 2 feet. **Each side** is enlarged so the sides are 3 times longer. What is the perimeter of the new square?
8. A restaurant has 237 tables. Each table seats 4 people. How many people can the restaurant seat?
9. The area of a rectangular rug is 520 square feet. The length of the rug is 8 feet. What is the width of the rug?
10. Jose is 12 years old. His brother is 5 years older than his sister. Jose's sister is 3 years older than Jose. How old is Jose's brother?

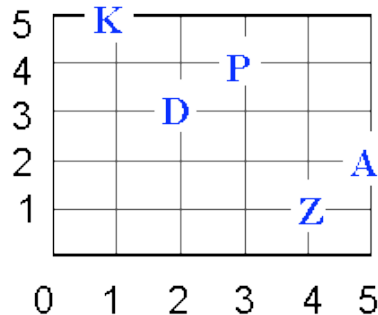
Show your work and/or explain your thinking for each problem.

Set 24

1. Using the grid, plot and label the following points. A (1,3); B (5,2); C (0,7); D (8,1); E(2,5)



2. Identify the coordinates of the points on the grid.



3. Estimate the product $48 \times 19 \times 5$.
4. Henry is a waiter. He earned \$4,630 in tips during 6 months. About how much money did he earn each month?
5. Sylvia rides her bike an average speed of 14 miles per hour. If she wants to ride for 4 hours, how far in one direction can she travel before turning around to go home?
6. Four friends are going to a minor league baseball game. They have \$60.00 altogether. They need to buy tickets and want to have some money left for snacks. Which tickets do you think they should buy? The prices are listed in the table below.

Box Seats	\$14.00
Lower Reserved Seats	\$12.00
Upper Reserved Seats	\$9.00
Bleachers	\$7.50

Show your work and/or explain your thinking for each problem.

Set 24 continued

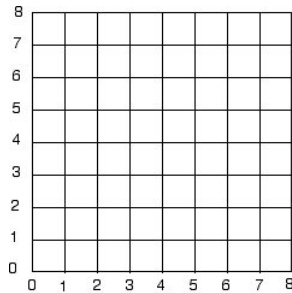
7. Jake mixes 3 cans of paint together. Each can holds 1.5 liters. How much paint does he have?
8. Amy buys **a bag of** party treats that cost \$1.89 with tax. How much will she spend if she buys 8 **bags of** party treats?
9. A concert hall has 10 sections; the sections are labeled A through J. Each section has 200 seats that are numbered as follows: A1, A2, A3, ...
How many seats are there in all?
How many seats are even numbered?
How many seats are a multiple of 10?
How many seats have a 5 in the tens digit?
10. The fifth graders at Apple Elementary School are preparing to take a required test. Testing takes an extra 10 minutes at the beginning of the test and an extra 5 minutes at the end to pass out and then collect the materials. How much total time will they need over the two days to take the test? Include the additional time and write your answer in hours and minutes.

Day 1	Day 2
50 minute test	25 minute test
20 minute test	70 minute test
15 minute test	40 minute test

Show your work and/or explain your thinking for each problem.

Set 25

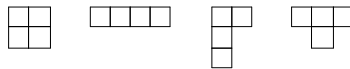
1. Imagine a rectangle with an area of 15 square units. Two of its vertices are at (0, 3) and (0, 0) Where could the other two vertices be located? Use the grid to draw the rectangle and then label the vertices.



2. Steve bought 6 bags of apples for \$2.95 a bag and a box of crackers for \$1.79. How much did it cost altogether? Note: food is not taxed
3. Which of the following letters has two lines that are perpendicular to each other?

A N T F M Z

4. All of the figures below are made up of four equal sized squares. Which figure has the least perimeter?



5. The school store lowered the price of cookies from \$0.30 to \$0.25 each. With \$3.00 how many more cookies can you buy now than you could before?
6. The mean of 7 numbers is 7. If six of the numbers are 1 what is the seventh number?
7. Add any of the four arithmetic symbols (+, -, x, ÷) and parenthesis to make a true statement. $10 \ 2 \ 7 \ 1 = 1$
8. Barry is helping his father measure the height of the trees in the yard. What unit of measure is the most appropriate for them to use? Liters, meters, centimeters, grams
9. Suzanne puts a 0 into the table below and gets an 8. When she puts in a 1 she gets a 9 and so on. What will she get if she puts in a 10? What is the rule?

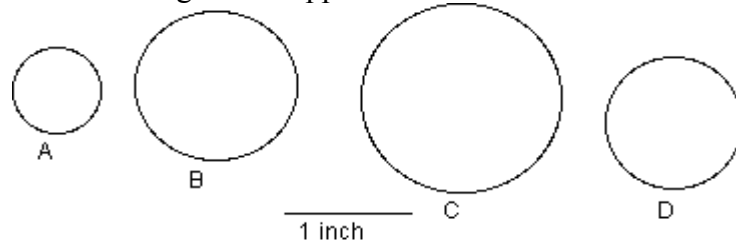
Input	Output
0	8
1	9
2	10
5	13

10. A triangle has side lengths of 3, 3, and 5. What type of triangle is it?

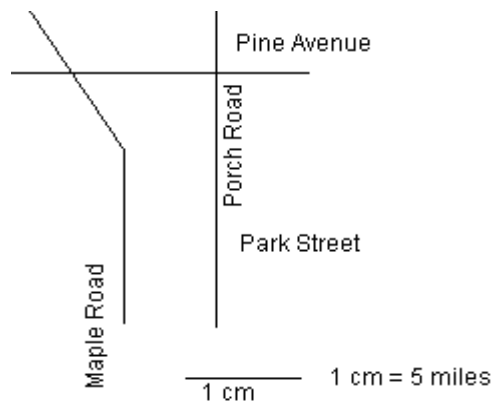
Show your work and/or explain your thinking for each problem.

Set 26

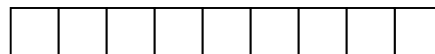
1. Which of the following circles appear to have a diameter that is less than 1 inch?



2. Jackie says if a polygon has four sides it must be a rectangle. Melinda disagrees. Draw a figure that proves that Melinda is correct.
3. Samantha is choosing an outfit for a school party. She has three party dresses and two pairs of shoes that match. How many different outfits consisting of a dress and a pair of shoes could she put together?
4. Approximately how many miles is it from the intersection of Park and Porch to Maple and Pine? Use the map to help you determine the distance.



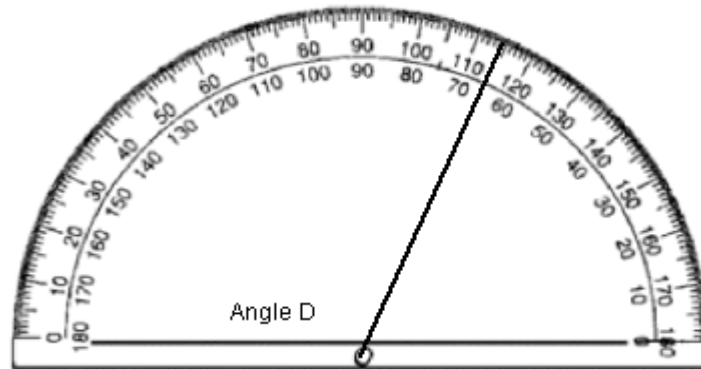
5. Brook earned money on the weekend mowing lawns in his neighborhood. When he got paid for his first job he had double the money he had when he left home. When he got paid for his second job he had triple the money he had after his first job. When he finished his last job of the day he had double the money he had after he finished his second job. Brook had \$60.00 at the end of the day. How much did he leave home with?
6. Jeff has enough paint to cover a wall that is 12 meters by 15 meters. At most how many squares of size 3 meter by 3 meters can he paint?
7. Taj has 20 feet of fencing to build a rectangular pen for her tortoise. One possibility is shown below. Each square is 1 foot on each side. What is the greatest possible area she can enclose with that much fencing?



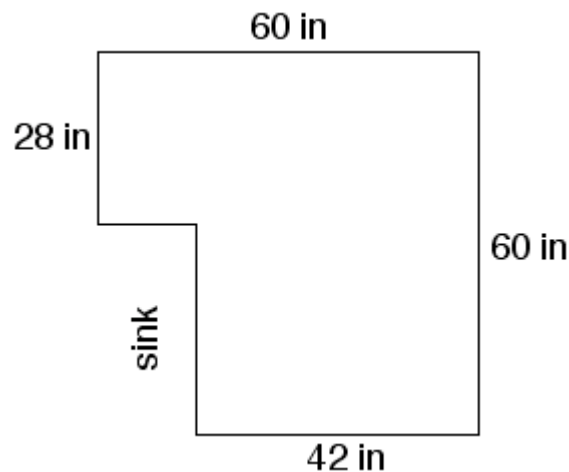
Show your work and/or explain your thinking for each problem.

Set 26 continued

8. Angle D is an obtuse angle. How many degrees are in Angle D shown on the protractor?



9. There were 16 blue marbles on the floor. Magdala picked up $\frac{1}{2}$ of the marbles. Trevon picked up $\frac{1}{4}$ of the marbles. How many marbles were picked up?
10. Helen is tiling her kitchen floor. The floor plan is shown below. What is the fewest number of 12 inch by 12 inch square tiles will it take for her to cover the kitchen floor? She can cut the tile where needed. Use the diagram to create a floor plan.



Show your work and/or explain your thinking for each problem.

Set 27

- 5 people are going to share the price of an \$11.95 cheese pizza. How much does each person pay?
- 16 colored golf balls were placed in a bag. The frequency table below shows the colors and number of the golf balls. What is the probability of randomly choosing a red golf ball on the first pick?

Blue	
Green	
Red	
Black	

- Sarah bought 3 pairs of shoes for school. **Each pair of shoes** costs between \$35.95 and \$51.49. What is the minimum amount of money she spent on shoes? What is the maximum amount of money she spent on shoes?
- Tamar wants to make dinner for her family. She reads the recipe directions and sees that it will take 20 minutes to prepare the meal, 45 minutes to cook it, and another 5 minutes letting it cool. How much time does Tamar need before dinner can be served? If she wants to put dinner on the table at 6:00 **pm** what is the latest time she should start?
- Salvatore and his friends created a tent from an old blanket and a clothesline. The top of the tent makes a 100° angle. When the two sides are tied down to the ground one side is 42 inches long and the other is 50 inches. Sketch the tent. What type of triangle did Salvatore and his friends create?
- Julio rides his bicycle 5 days a week. The table shows the number of miles he rides each day. What is the mean number of miles he bikes each day?

Day	Monday	Tuesday	Wednesday	Thursday	Friday
Miles Biked	5	3	6	7	9

- Don loves pie. He takes \$10.00 to the bakery and orders 3 pieces of strawberry pie. Each slice costs \$2.75. How much change does Don get back?
- Ralph is averaging about 45 minutes of homework each night. Ralph goes to school 5 days a week for 36 weeks. About how many minutes of homework will Ralph do during the year?
- $(52 \times 3) + (52 \times 5) + (52 \times 2) = (52 \times ?)$
- The number 2007 is a four digit number. What is the sum of the **greatest** four digit number and the **greatest** five digit number?

Show your work and/or explain your thinking for each problem.

Set 28

1. Write 2,431,574 in expanded form.
2. Write $7,000,000 + 600,000 + 30,000 + 1,000 + 800 + 90 + 1$ in standard form.
3. The diameter of a plant cell is 0.23 mm. A microscope enlarges the **image of the** cell 100 times. What diameter does the cell appear **to have** under the microscope?
4. The Library charges a late fine of \$0.25 each day a book is overdue. Tony is returning a book that is 2 weeks late. How much will he pay in overdue fines?
5. Josie paid \$2.97 for a package of 3 candy bars. What was the cost for each candy bar?
6. A local TV station surveyed 9,798 people about the number of hours they watched TV each day. Why would a line plot **NOT** be a good choice to use to display the survey results?
7. Susan asked students in her class their favorite color. She wanted to use a line graph to show her data. Explain why a line graph would not be appropriate to display the data she collected. What type of graph would you use? Explain your choice.
8. The stem-and-leaf-plot shows the ages of people exiting a movie theater.

Stem	Leaf
1	0 2 4
2	0 1 3 4 5 8 9
3	1 4 5 6 9
4	4
5	0 8 8

Key: 1|2 = 12 years

How does the stem-and-leaf plot make it easily see the ages of the people? Compare this graph to a similar bar graph.

9. Ms. Johnson made a double bar graph to show the number of boys in each 5th grade math class and the number of girls in each 5th grade math class. Could she show this information in a single bar graph? Why or why not?
10. The input/output rule for a table is “subtract 15”. Make an input/out table that shows the first 8 values where the first term is 125 **and the second term is 126**.

Show your work and/or explain your thinking for each problem.

Set 29

1. At noon the temperature was 89 degrees. At 5:00 pm it was 6 degrees warmer than it was at noon. Use the open sentence to find out what the temperature (t) was at 5:00 pm. $89 + 6 = t$
2. Marie scored 32 points during a basketball game. This is 11 points less than Tina. How many points (p) did Tina score? Use the open sentence, $p - 11 = 32$, to determine how many points Tina scored.
3. There are 48 boys in gym class. How many 6-person volleyball teams (t) can be made from this class? Use the open sentence, $48 \div 6 = t$.
4. Allen is paid \$5 for every yard he mows. He made \$75 in one month. How many yards (y) did he mow that month? Write an open sentence that describes this situation then solve it.
5. There are 6 rows of chairs in Jessie's classroom. Each row has 7 desks. How many desks (d) are there in the classroom? Write an open sentence that describes this situation then solve it.
6. A softball team started the season with 136 baseballs. At the end of the three-month season, there were 14 baseballs left. How many baseballs (b) were lost?
7. The table shows the number of TV viewers (in millions) for five days. Thomas is going to make both a bar graph and a line graph to display the data.

Day of Week	Number of Viewers (in millions)
Sunday	76
Monday	82
Tuesday	81
Wednesday	83
Thursday	79

Which display is best to show a comparison of the data? Why?

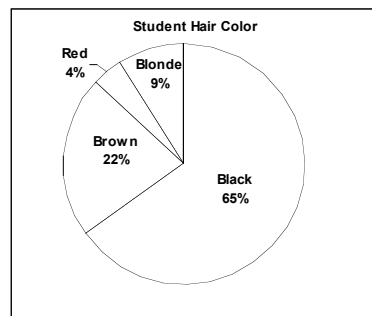
Which display is best to show changes as the week progresses? Why?

8. The number 0.49 has 4 tenths and 9 hundredths. Why is it read 49 hundredths?
9. What is the place value of the 6 in 47.65?
10. The number 9,500 has been rounded to the nearest hundredth. What is the smallest number it could have been?

Show your work and/or explain your thinking for each problem.

Set 30

1. $56 + 10 = p$ is an equation that describes what happens when a price of a pair of \$56 shoes is increased by \$10. What is the new price of the shoes?
2. It takes Steven twice as much time to do his homework as it does for Alex to do his homework. It takes Alex 25 minutes to do his homework. How long does it take Steven?
3. A fishing boat brings back 450 pounds of fish each day. How many pounds of fish does it bring back in 6 days? Write an open sentence that describes this situation then solve it.
4. First prize in a dancing contest is \$210. There are 3 girls on the team who received first place. How much did each girl win? Write an open sentence that describes this situation then solve it.
5. Jordan's baseball team won 32 games this season while playing a total of 46 games. How many games did Jordan's team lose? $32 + g = 46$
6. A house on Birch Street sold for \$259,000. A house on Elm Street sold for \$256,000. By how much did the houses differ in price?
7. Mr. Carmen earns \$900 each week. He gets paid every 4 weeks. How much money does he get during each 4-week period?
8. 5th grade students were surveyed about their hair color. A circle graph was made to display the data.



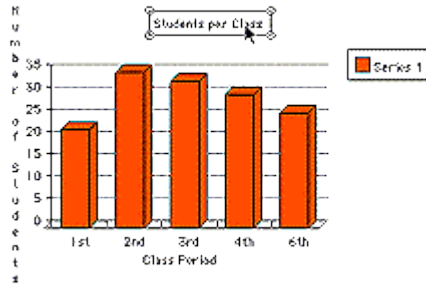
What other type(s) of graph could have been made to display the data? Explain your reasoning.

9. What type of graph would be most appropriate to represent information about the tallest buildings in the world? Explain your choice.
10. The Brayman triplets have saved \$50.25 to go to the carnival. They want to share the money equally. How much money will each of the triplets get to go to the carnival?

Show your work and/or explain your thinking for each problem.

Set 31

1. Use the clues to find the dimensions, the area, and the perimeter of the geometric figure described. Clues:
I am a rectangle.
My dimensions are consecutive whole numbers.
My perimeter has 4 factors
My area is less than 100 but greater than the 7th prime number. Who am I?
2. A kilogram is about 2.2 pounds. Would a 500 pound lion weigh more or less than 200 kilograms?
3. Rafael's average bowling score after 4 games was 149. What must he score on the 5th game to raise his average to 153?
4. The graph below shows the number of students in Mr. Teshima's science classes. What is the median class size?



5. Devin went shopping for his father. He spent \$2.36 at the drugstore and \$5.15 at the grocery store. His father gave him \$10.00. How much change did Devin give back to his father?
6. The data below shows how students scored on last week's math test.

70, 70, 75, 75, 75, 80, 80, 80, 80, 85, 85, 85, 90, 90, 90, 90, 90, 95, 100, 100, 100, 100

Make a line plot for these scores. Be sure to include a title and labels. What are the median and the mode of the set of data?
7. Esta is buying a softball bat and 4 softballs **on line so there is no tax**. Each bat costs \$18.95. Each softball costs \$8.95. How much money does Esta need?
8. Coral is 5 years older than Natalie. Natalie is 6 years older than Curtis. Together the three students' ages add up to **29**. How old is each of the students?

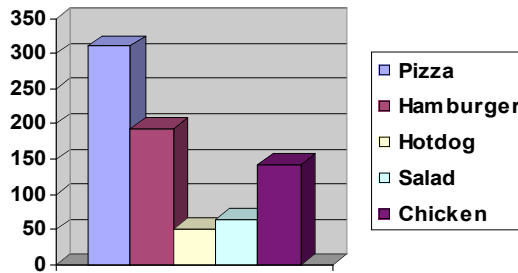
Show your work and/or explain your thinking for each problem.

Set 31 continued

9. Sherry has two quarters, three dimes and a nickel. Use the table to determine the total weight of Sherry's coins.

Weights of U.S. Coins	
Penny	3.125 grams
Nickel	5 grams
Dime	2.5 grams
Quarter	6.25 grams

10. The students at the Boys and Girls Club were surveyed to find out what their favorite food was. The results are shown in the bar graph below. Create a pie chart (**circle graph**) that displays the same data.



Show your work and/or explain your thinking for each problem.

Set 32

1. The average weight of a Tyrannosaurus Rex dinosaur was 7360 kilograms (about 14,000 pounds). This is rounded to the nearest ten. What is the maximum weight the Tyrannosaurus Rex could have been?
2. The Lyon Lions are raising money for sports equipment by selling pretzels. The table below shows the number of pretzels sold in one week.

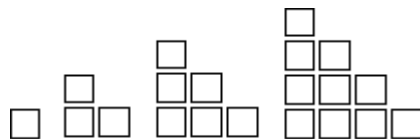
Day	Sun.	Mon.	Tues.	Weds.	Thurs.	Fri.	Sat.
Pretzels	25	36	36	18	29		16

Keisha accidentally spilled juice on the chart and cannot read Friday's sales but she does know that the median is 29. What are all possible values for Friday's sales?

3. A sheet of construction paper is 8.5 inches wide. If it is cut into 5 equal strips. What is the width of each of the 5 strips?
4. Patricia spends \$11.85 on 3 sets of stickers. How much was each set?
5. LaQuan has 40 photographs to put into a picture album. He can put 6 photographs on each page. How many pages does he need?
6. Ms. Hamm's science students are tracking the daily high temperatures during the month of May. What type of graph would be the most appropriate to show the change in temperature during May? Explain.
7. The figure shown was reflected/flipped across the line. Sketch the original and its reflection.



8. Miranda is playing with square tile. She is arranging them in the pattern shown below. The first four arrangements are shown. Sketch the fifth and sixth figures. How many squares would it take to build the seventh figure?



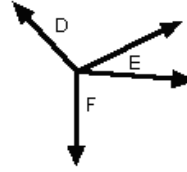
9. It is 347 miles from Jacksonville, Florida to Miami, Florida. If the Carson family averages 50 miles per hour about how long will it take to drive from Jacksonville to Miami?
10. Leslie bought a soda for herself and three of her friends. Each soda cost \$1.30. How much did she spend on the sodas?

Show your work and/or explain your thinking for each problem.

Set 33

1. Mrs. Teshima buys 5 pounds of apples for \$.59 per pound. How much does she pay for the apples?

2. Which angle appears to be acute? Explain.

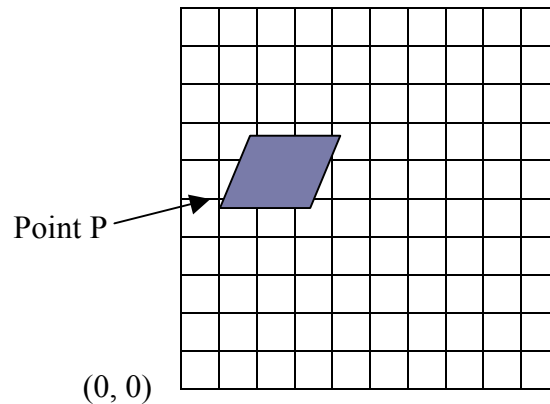


3. Which angle appears to be obtuse? Explain

4. The teacher picks a number at random from the numbers 1 through 21. What is the probability that the number will be odd? Write your answer as a fraction.

5. The sum of 5 consecutive whole numbers is 2010. What are the five whole numbers?

6. The parallelogram shown in the figure has one vertex, Point P, located at (1, 5). Translate the figure right three units and down 1 unit. What are the coordinates of Point P on the translated parallelogram?



7. Mr. Brown drives 5.6 miles to get to school in the morning. After school he drives 2.9 miles to the grocery store, and then 3.55 miles back home. When he gets home the odometer on his car reads 15,550 miles. What did the odometer **read** before he left for school in the morning?

8. Write the following number in standard form.

Two-thousand three-hundred fifty-four and twenty-seven hundredths

9. Insert parenthesis and any of the four arithmetic operations to make a true statement.

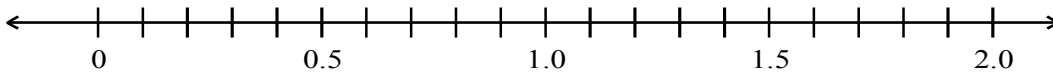
$$20 \ 6 \ 2 \ 9 \ 3 = 11$$

10. Craig is creating an art project involving circles. The diameters of the three circles are 12 inches, 5 inches, and 7 inches. What is the radius of each of the three circles?

Show your work and/or explain your thinking for each problem.

Set 34

1. On the average, a car rental company rents 987 cars per month. How many cars does it rent in one year? (1 year = 12 months)
2. Angie wants to buy a CD for \$19.50, a book for \$24.95, and a t-shirt for \$15. She has \$68. How much change will she get back?
3. A square and a regular pentagon have the same perimeter. The length of each side of the square is 15 feet. How long is each side of the pentagon?
4. Mr. Lee used 12 gallons of gasoline to drive 146.4 miles. On the average how many miles per gallon did she drive?
5. A bag of candy contains about 415 pieces. If the bag was divided evenly among 30 students, about how many pieces of candy would each student receive?
6. Which answer makes the inequality true? $24 + 19 > h$ {33, 43}
7. Order the decimals from least to greatest. Then place them on a number line.
0.4, 1.9, 1.1, 0.7, 1.5



8. Karla is practicing for a dance competition. On Monday, she practices for $1\frac{4}{6}$ hours. On Tuesday, she practices for $1\frac{5}{6}$ hours. On Wednesday, she practices for $2\frac{1}{6}$ hours. On Thursday, she practices for $1\frac{3}{6}$ hours. On Friday, she practices for $1\frac{2}{6}$ hours. How many hours does she practice in all?

9. The rectangle has been divided into 10 equal parts. Represent the shaded portion as a decimal and as a fraction, in simplest form.



10. Bob drove his car 14.0 miles on Monday, 23.8 miles on Tuesday and 5.3 miles on Wednesday. How many miles did he drive on all 3 days?

Show your work and/or explain your thinking for each problem.

Set 35

1. There are 12 floors to an apartment building. Each floor has 8 apartments. How many apartments are there in the building?
2. Two sides of a triangle are 26 feet and 31 feet. Find the length of the third side of the triangle if the perimeter of 100 feet.
3. Doreen walks $1\frac{1}{2}$ miles a day to the bus stop (round trip). If she walks to the bus stop 5 days each week, how many miles does she walk each week?
4. Ms. Jackson is making hamburgers. Each hamburger weighs $\frac{1}{4}$ pound. She has 3 pounds of meat. How many hamburgers can she make?
5. Erik went shopping in a grocery store. He bought the following priced items: \$1.78, \$10.25, \$2.58, \$1.18, \$0.58. How much money did he spend?
6. The school cafeteria has tables that seat 6 people. There are 86 people who need to be seated. How many tables will be needed?
7. Use order of operations to simplify the expression: $16 \div 4 - 2 + 5 \times (5-3)$
8. A bus leaves Henderson at 4:15 pm. It arrives in Indian Springs at 5:38 pm. How long was the bus trip?
9. Susan put 1 quarter in her piggy bank on Monday, 2 quarters on Tuesday, 4 quarters on Wednesday, and 8 quarters on Thursday. If the pattern continues, how many quarters will she put in her piggy bank on Saturday?
10. Each ticket to the spring concert costs \$3.50. If 5 tickets are purchased in a packet, the cost is \$15.00. How much money does the discount save a group of 5 people?

Show your work and/or explain your thinking for each problem.

Set 36

1. Randy is filling his fish tank. Which would be most appropriate to use to fill the tank: a tablespoon, a cup, a gallon? Explain.
2. Which unit of measure is most precise to measure the length of your hand: millimeter, centimeter, or meter? Explain
3. The after-school math club is having a Pizza Party. The bill for the pizza is \$64.36. The math club advisor pays \$10. The 12 members of math club decide to split the rest of the bill evenly. How much will each person pay?
4. Karen’s track coach is getting the team in shape by having them run laps. On the first day, she ran 1 lap. On the second day, she ran 3 laps. On the third day, she ran 5 laps, and on the fourth day she ran seven laps. How many laps did she run on the fifth day? Describe the pattern.
5. Ms. Salmon went shopping and spent half her money on groceries. Then she stopped at a fast food restaurant and spent \$6.30. After that, she spent \$45 to fill her gas tank. When she got home, she had \$20 left. How much money did she have at the start?
6. The first term is 24. The rule is “multiply by 2.” What are the next 3 terms in the sequence?
7. The table below shows the number of students in grades 1 through 5 at an elementary school. Which type or types of graph would best represent the data? Explain.

School Population by Grade Level	
Grade	Number of Students
1	70
2	55
3	55
4	70
5	85

8. Write 7,543,096 in expanded form.
9. Miguel drank $\frac{2}{8}$ of a can of soda. Mario drank $\frac{1}{8}$ of the can. What fraction of the soda is left?
10. Andrew is coaching a basketball team in his neighborhood. He needs to buy basketballs. The price for each basketball is \$9 and includes tax. How many basketballs can Andrew purchase for \$63? Write an open sentence that could be used to solve this problem and then solve it.