Smiley Face Math **Name:** _____
Grade 4, Worksheet I

☺ ☺ 1. Write the missing numbers in the pattern.

88, 84, 85, 81, 82, 78, 79, 75, 76, ___, 73, 69, ___, ___, ___, 63, ...

Describe the pattern above—tell how to get from one term to the next:

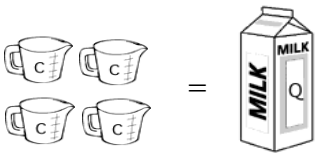
☺ ☺ ☺ 2. The school is selling yearbooks. Each yearbook costs $5 to make and is sold for $11. The school paid for 300 yearbooks, and has now sold 250 of them. How much profit has been made? Circle your answer.

A. $250 C. $1,500

B. $1,250 D. $2,750

☺ ☺ ☺ 3. Four cups = 1 quart and four quarts = 1 gallon. If your Mom buys two gallons of milk for a party, and each kid gets 1 cup with their cookies, how many kids could have milk?

Answer: _____ kids



☺ ☺ ☺ 4. Jack mows lawns during the summer. He receives $9 for every lawn he mows. If he mows 4 lawns per week for 12 weeks, how much would Jack earn? Explain how you got your answer.

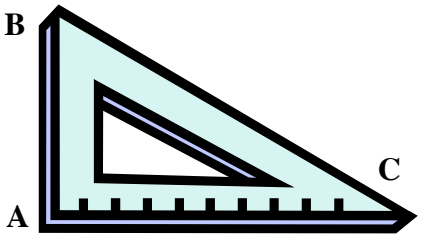
Answer: Jack would make _____.

Explanation:

☺ ☺ 5. Tyler ate ½ of his birthday cake. Show that amount as a decimal.

Answer: Tyler ate _____ of his birthday cake.

☺ 6. What is the measure of angle A in the figure below—45°, 90°, 180°, or 360°? Then explain about how many degrees angles B and C are, from knowing angle A's measure.



Answer: Angle A is _____. Angles B and C are probably about _____ and _____ degrees because:

☺ ☺ ☺ 7. Kristen, Joey, Alyssa and Lee ran a race at their school Olympics. Their times are in the chart below. Who received the first place medal? The second place medal? The third place medal? Then explain how you know.

Student	Time
Kristen	0.79 min
Joey	0.77 min
Alyssa	0.8 min
Lee	0.67 min

Answer: First place: _____

Second place: _____

Third place: _____

Explain how you can tell who came in 1st, 2nd, and 3rd:

_____

_____

☺ 8. Martha wants to plant 45 flowers in 5 flower beds. She decides to plant the same number in each flower bed. How many does she plant in each?

Draw a picture if you need help knowing what to do. Write a complete number sentence for your answer:

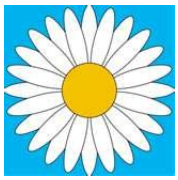
Answer: _____

Smiley Face Math **Name:** _____
Grade 4, Worksheet II

☺ ☺ 1. Classify each of the following figures as having **line symmetry** or **rotational and line symmetry.**

_____

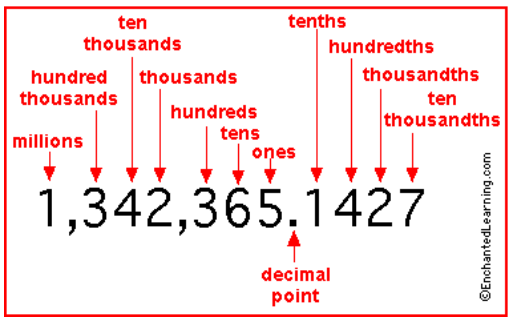
_____



_____

_____

☺ 2. A big shark might weigh 433.38 pounds. Write the number **433.38** in word form. Use the chart below to help you.



Answer: _____

_____

☺ ☺ 3. 72 oranges distributed equally into *b* number of bags gives 9 oranges per bag. Circle the equation that matches the words.

A. $9 \div 72 = b$ B. $72 \div b = 9$ C. $9 - b = 72$ D. $9 \div b = 72$

☺ ☺ ☺ 4. The Perez family is taking a summer trip across the United States. They plan to go 150 miles each day and then camp out at night. They leave on June 1st.

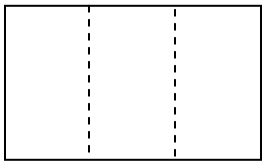
a. By June 7th, how far will they have traveled? _____

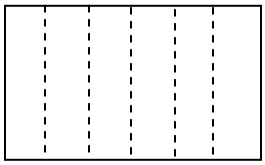
b. By June 17th, how far will they have traveled? _____

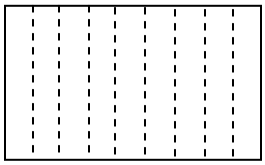
c. By the end of June, how far will they have traveled? _____

☺ ☺ ☺ 5. Below is a pan of brownies. Divide and shade the rectangle to its right to show 2/3 of a pan of brownies. Then shade the next rectangle to show 4/6 of a pan. Then shade the last rectangle to show 6/9 of a pan. What can you conclude?

Answer: ____ = ____ = ____







☺ ☺ 6. Some artists pride themselves on painting very small pictures. What is the *area* of this tiny picture, in square centimeters?

Answer: ____ square centimeters

(Hint:  is a square centimeter.)

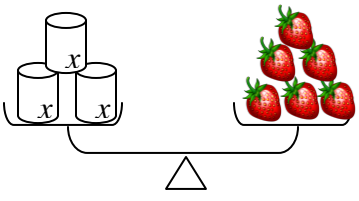
4 cm

3 cm

☺ ☺ ☺ 7. Write an equation to show the relationship on the balance scale below. Each strawberry weighs 10 grams. Solve the equation to find the weight of one can.

Answer: Equation: _____

Solution: x = ___ grams



Smiley Face Math **Name:** _____
Grade 4, Worksheet III

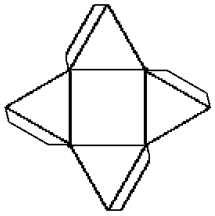
☺ ☺ 1. Rebecca and her friends ate parts of their candy bars. Draw a line from the fraction of the candy bar to the decimal it represents.

Remaining candy bar

A.	½	0.75
B.	¼	0.50
C.	¾	0.25

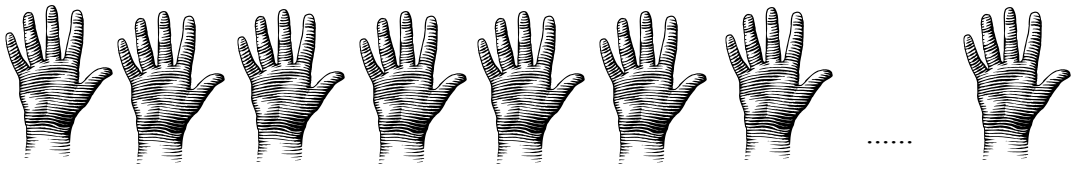
☺ ☺ ☺ 2. Circle the building that could be made from this *net*.

Net:



Buildings:

☺ ☺ 3. Write the first seven multiples of 5. Then write the 10th multiple of 5.



___, ___, ___, ___, ___, ___, ___, ... ___,

☺ ☺ 4. Robert is selling candy bars for a school fund-raiser. He sells a total of 56 candy bars to 8 neighbors. Each neighbor buys the same number of candy bars. How many candy bars does each buy?

Answer: _____ candy bars

☺ ☺ 5. A. What tool would you use to measure Peter's height? _____

Peter

B. Circle the unit of measure you would use.

Answer:

feet or
pounds or
square inches or
degrees Celsius

☺ ☺ 6. A. Circle the fraction that is equivalent to 3/12.

A. 1/2 C. 3/4

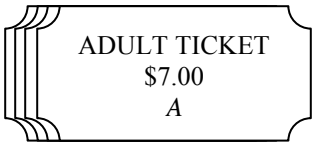
B. 1/4 D. 12/3

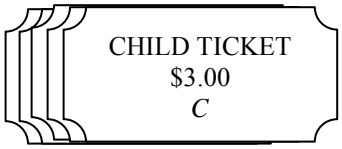
B. Write about it. Tell how you know that fraction is equivalent to 3/12.

_____

_____

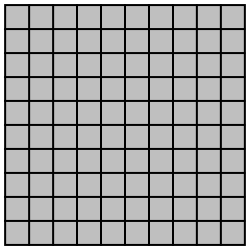
☺ ☺ ☺ 7. George buys 4 adult fair tickets at $7 each and 5 child tickets at $3 each. Write an algebraic expression to find the total cost. Use *A* to stand for the cost of an adult ticket and *C* the cost for a child's ticket.

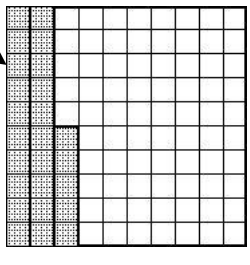




Answer: The expression for the cost is: _____.

The actual total cost is _____.

☺ 8. If  = 1 whole, what decimal represents the shaded part below?



Answer:_____

Smiley Face Math **Name:** _____
Grade 4, Worksheet IV

☺ ☺ 1. Michael wanted to buy 5 videogames for $24 each off the internet. He has $125 in his piggy bank. Estimate to see if he has enough money. Explain how you know.

Answer:

☺ ☺ ☺ 2. The fair averages about 3850 people in attendance each week day, and about 5100 on Saturday and again on Sunday. Estimate to the nearest thousand about how many people attend the fair each week.

Answer: _____

☺ ☺ ☺ ☺ 3. Compare the two animals.

A. Does Brian the Bee or Cassie the Cow weigh more? _____

B. What tool would you use to find out? _____

C. Would you weigh Brian the Bee in ounces or in pounds? _____

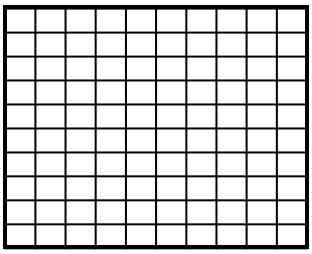
D. Would you weigh Cassie the Cow in ounces or in pounds? _____

☺ ☺ 4. Brian has 72 baseball cards in his collection. He wants to put his collection in an album. Each page holds 8 cards. Write an equation to tell how to solve the problem. Solve the equation to find the answer.

Answer: equation for the problem: _____

Solution to the equation: _____

☺ ☺ 5. Shade in 0.86 on this grid. Think of the grid itself as 1 whole.

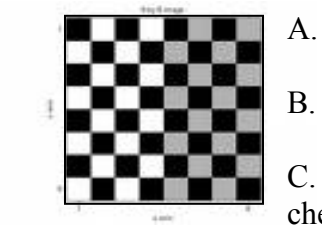


What are two names for the shaded part?

One name is: ____ *tenths* and ____ *hundredths*

Another name is: _____ *hundredths*

☺ ☺ ☺ 6. Look at the checkerboard below.



A. How many black, white, or gray squares are in each row? ____

B. How many squares are in each column? ____

C. If each square is 1 *square inch* in size, what is the *area* of the checkerboard? _____ square inches

☺ ☺ ☺ 7. Sarah has 24 jelly beans. She wants to give them to her friends. How many friends could she give them to so they all got the same number, with no jelly beans left over?

Answer: She could give them to these numbers of friends:

_____, _____, _____, _____, _____, _____, _____, _____

☺ ☺ ☺ 8. Nick is playing a bongo drum. He taps the drum with his right hand 4 times, his left hand 2 times, then his right hand 3 times. He repeats this pattern 6 times during a song. How many times does he tap the drum?

Answer:_____

☺ ☺ 9. During a basketball game, Marcia scored 7 points and Ann scored 5 points. Juanita scored 3 times as many points as Marcia and Ann together. How many points did Juanita score?

Answer: _____

Smiley Face Math **Name:** _____
Grade 4, Worksheet V

☺ ☺ ☺ 1. A scientist has a jar with 4.8 liters of acid in it. She pours 1.9 liters of acid into another jar. To the nearest liter, about how much acid is left in the first jar?

Answer: _____ liters

☺ ☺ 2. Three race cars are driving around a 4-mile track 110 times. Find the total number of miles the three cars travel. Explain how you got your answer.

Answer: _____ miles

Explanation:

☺ ☺ 3. Omar has 4/10 of a dollar in change. All of his coins are dimes. Circle the way to write his amount of money as a decimal.

A. $0.04

B. 0.40¢

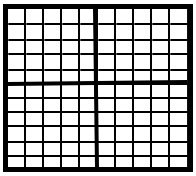
C. $0.40

D. 0.10¢

☺ ☺ ☺ 4. Joe was in charge of making a rectangular parking lot for 36 cars. He could make 1 row of 36 cars but that would be a strange parking lot. Tell all the different ways that Joe could design the lot. How many ways are there?

Answer: *Joe could make a 1 row-by-36 car lot as below; or a 2 row-by-___ car lot; or a 3 row-by-___ car lot; or a 4 row-by-__car lot; or a 6 row-by-___ car lot; or a 9 row-by-___ car lot; or a 12 row-by-___ car lot; or an 18 row-by-___ car lot; or a 36row-by-___ car lot. There are ___ ways all together.*

1 2 3 4 5 6 36



☺ ☺ 5. Shade in ¼ of the rectangle to the right. Then circle the letter with the equivalent decimal and percent for ¼.

A. 0.25 and 25% B. 0.04 and 4% C. 25 and 25% D. 0.4 and 40%

☺ ☺ ☺ 6. Identify the rule for each input-output table and complete the table. Then explain the relationship between the two tables.

a. Rule: _____

Input	Output
1	3
4	12
6	18
7	
9	
x	*?*

b. Rule: _____

Input	Output
3	1
12	4
18	6
21	
27	
x	*?*

Explain: _____

_____

☺ ☺ ☺ 7. Sylvia spends 150 minutes each morning and 85 minutes each night, 3 days a month, on the Internet. Write an equation to show how much time each month Sylvia spends on the Internet. Let *t* represent the total time she spends on the Internet. Then find a value for *t*.

Answer: equation: _____

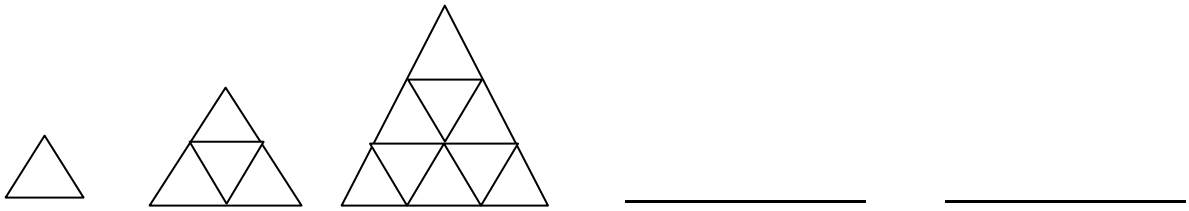
Total time per month: _____ minutes

☺ ☺ ☺ ☺ 8. A song is played at a fast tempo of 180 beats per minute. If the song lasts 3 minutes and 58 seconds, about how many beats are there in the song?

Answer: about ____ beats

Smiley Face Math **Name:** _____
Grade 4, Worksheet VI

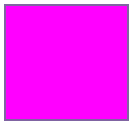
☺ ☺ ☺ ☺ 1. a. Draw the 4th and 5th figures to follow the pattern of triangles below.



1st 2nd 3rd 4th 5th

b. How many little triangles would be in the 6th and 7th figures? Tell how you know without drawing the figures.

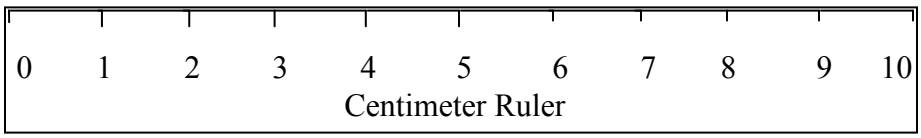
☺ ☺ 2. What is the sum of the degrees of the angles in a square?



Answer: _____°

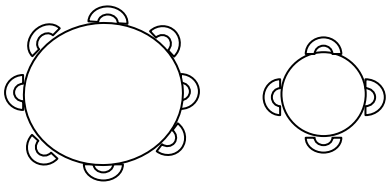
☺ ☺ 3. Below is a centimeter ruler. Mark on the ruler about where these pencils would end, if measured with this ruler.

Pencil A: 5.7 centimeters **Pencil B**: 7.3 centimeters **Pencil C**: 9.2 centimeters



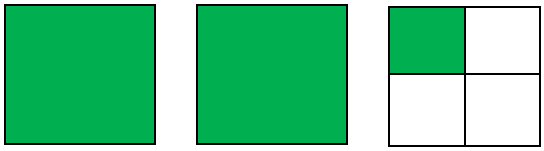
☺ ☺ ☺ 4. Show that this object has *rotational symmetry*. Show that you can trace over it, and turn the tracing less than a full turn, and it matches itself.

☺ ☺ ☺ 5. Sue is planning a picnic for 70 people. Eight people can sit around the large picnic tables. The small tables seat four people. There are only four large tables and they are all full. Sue thinks she needs nine small tables to seat the rest of the guests. Is she right? If not, how many small tables will she need? Draw a diagram to show your thinking.



Answer and explanation:

☺ 6. Write a decimal that matches the shaded area of the picture. Each large box is 1 square inch.



Answer: The shaded area shows _____ square inches total.

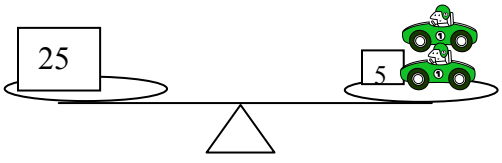
☺ ☺ 7. Kelly painted eggs for an egg hunt. She can paint an egg in 10 minutes. If she painted for two hours, how many eggs did she paint?

Kelly's start time: 

Kelly's end time: 

Answer: Kelly painted ____ eggs.

☺ ☺ ☺ 8. Hank was working with a balance scale. He balanced two toy cars and one 5-gram block with a 25-gram weight. He let *w* stand for the weight of one car, and he said that *w* = 7 grams. Was he correct? ____ If not, how much did each toy car weigh? ___

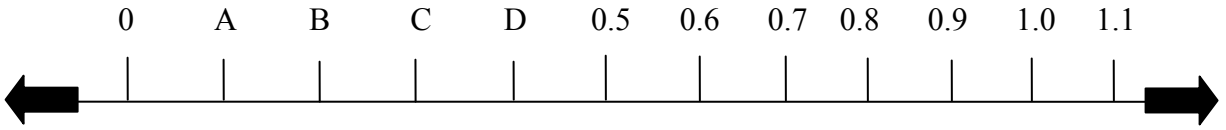


Smiley Face Math **Name:** _____
Grade 4, Worksheet VII

☺ ☺ 1. Start with a standard 8½ inch-by-11 inch sheet of paper. Use an inch-ruler to mark off inches around the edges and draw lines to divide the paper into square inches. Count the square inches, including whole square inches and 1/2 square inches. What is the total *area* of the paper?

____ square inches

☺ ☺ 2. Write the decimal for each letter on the number line below.

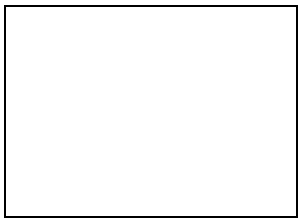


A:_____ B:_____ C:_____ D:_____

☺ ☺ ☺ 3. The fourth-grade class is preparing to paint a mural on one interior wall of the school. First the students need to paint the entire wall pink. The wall is 15 feet tall and 20 feet wide. One quart of paint will cover an area of 100 square feet. How many quarts of paint should the students buy?

Answer: _____ quarts of paint

15 feet



20 feet

1 quart will cover 100 square feet

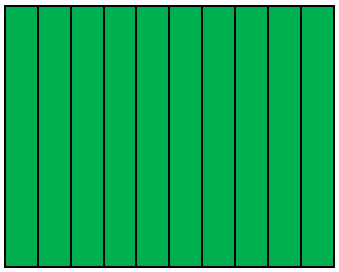
☺ ☺ ☺ ☺ 4. On average, the circus sells 1250 tickets each performance. If the circus has 24 performances a month, what is the total number of tickets sold each month?

Answer: _____ tickets

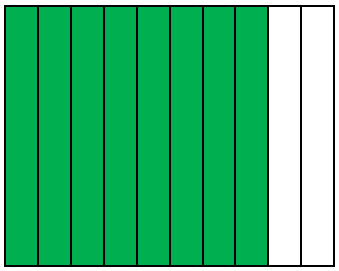
☺ ☺ 5. If figure A shows one whole, what fraction and what decimal show the shaded part of figure B? What number shows the shaded part of A and B together?

Answer: B: ___ as a fraction and ___ as a decimal
A + B can be written as ____ or as ____.

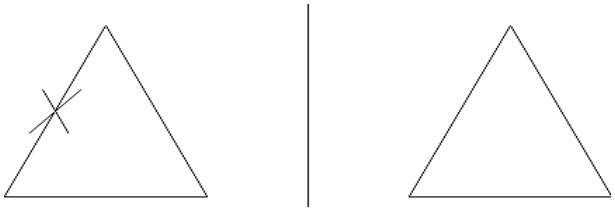
A



B



☺ ☺ 6. There is an X on the original triangle. Mark where X would be when *reflected* across the line onto the triangle on the right.



☺ ☺ ☺ 7. Mario's bowling ball weighs 8 pounds 6 ounces. How many ounces does the ball weigh?

(1 pound = 16 ounces)

Answer: The ball weighs ____ ounces

☺ ☺ 8. What type of symmetry—line or rotational—do the blades of a windmill have, and why?

Answer: _____ symmetry and here is how I know:

Smiley Face Math **Name:** _____
Grade 4, Worksheet VIII

☺ 1. Sarah is using the Internet to do a book report on animals. She typed the word "mammal" into a search engine. The search engine found 1,856,324 web sites with the word "mammal".

What is the place value of "5" in "1,856,324"? _____

What is the place value of "6" in "1,856,324"? _____

What is the place value of "8" in "1,856,324"? _____

☺ ☺ ☺ 2. Angles that are 90° are called **right angles** . Angles that are less than 90° are called **acute angles**. Angles that are greater than 90° are called **obtuse angles**. You can use the corner of a sheet of paper to tell what type of angle you have.

Classify each of the angles made by the hour and minute hands as **acute**, **right**, or **obtuse**.

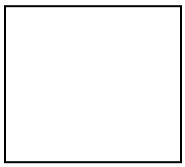
_____ _____ _____ _____ _____

☺ 3. Steve has trouble remembering that 7×6 = 42. But he does know that 5×6 = 30 because the "5 times" facts are easy for Steve. Tell how Steve can use what he knows to quickly figure out that 7×6 = 42.

Explanation:

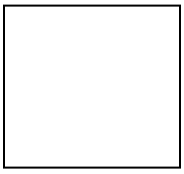
☺ ☺ 4. Diana bought ¼ pound of potatoes. Wayne bought ⅜ pound of broccoli. Show by shading in the rectangles below that Wayne's vegetables weighed more than Diana's. Each rectangle shows one whole pound.

Diana's potatoes



Wayne's broccoli

☺ ☺ 5. Since 16 ounces = 1 pound, you can tell how many ounces Diana and Wayne bought by dividing the "pounds" picture into *sixteenths* instead of into *fourths* and *eighths* as you did above. Divide the squares again, but this time into *sixteenths*, and see how many ounces each person bought.



Diana's potatoes
= ___ ounces

Wayne's broccoli
= ___ ounces

☺ 6. Use the calendar. Answer the questions below.

January 2009

Su	M	Tu	W	Th	F	Sa
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

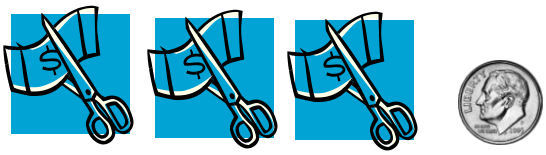
a. Circle the multiples of 2. Then draw a square around the multiples of 3.

b. Which numbers have both circles and squares around them? __. ___, ___, ___, and ___

c. Which *single number* is your circled and squared numbers a multiple of? ____

☺ ☺ ☺ 7. Six apples cost Javier $3.10. About how much did each apple cost?

=



Answer: about $_____

Smiley Face Math **Name:** _____
Grade 4, Worksheet IX

☺ ☺ ☺ ☺ 1. John walks between 1.8 and 3.2 miles each school day. ESTIMATE the number of miles he walks during the school week.

Estimate:_____

Below, explain how you made your estimate.

☺ ☺ ☺ 2. Brooke wanted a new music CD. Her Dad said he would buy it for her if she could guess the price, which was between $13 and $14.

a. How many money amounts are there between $13 and $14? _____

b. Name any five of those money amounts. Circle the one closest to $14:

_____, _____, _____, _____, _____

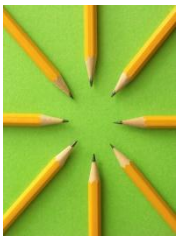
☺ ☺ 3. What angle do the hour and minute hands on the clock form at 3:00 o'clock? At 6:00 o'clock?

Answer: _____º

and _____ º

☺ ☺ ☺ 4. Trace this flag on paper you can see through. Flip your tracing on the right-hand edge of the flag. Then slide it about an inch to the right. Turn it 180º (which is a half-circle) about the center. Draw the image you have now. What does it look like?

☺ ☺ ☺ 5. Mrs. Johnson uses eight pencils each day in her reading group. One day she used pencils this long:



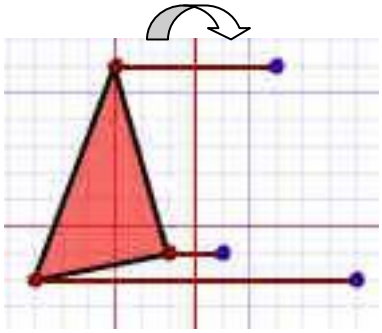
9.8 cm, 18 cm, 13.1 cm, 12.9 cm 10.4 cm, 13.7 cm, 14.1 cm, 9.7 cm

Draw a circle around the shortest length. Draw a triangle around the longest length.

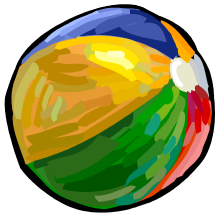
☺ ☺ 6. Homero, Billy, and Yazan have been collecting shells on Clearwater Beach. They found 33 shells in all. They both want to take home the same number of shells. How many shells will each boy get?

Answer:_____

☺ ☺ 7. Draw the reflection of the triangle below, using the dots to the right of the reflection line.



☺ ☺ ☺ 8. Dorian's having an end of the year party for his class. There are 23 students in his class. He would like to buy a beach ball for each student. Five beach balls come in a package. How many packages will Dorian have to buy so that everyone will get a ball?



Answer: _____ packages

Smiley Face Math **Name:** _____
Grade 4, Worksheet X

☺ ☺ 1. Jack is on vacation with his family in Orlando. He brought 5 pairs of shorts and 4 shirts. How many outfits can he make? (An "outfit" is any shirt matched with any pair of pants.)

Answer: _____ outfits

☺ ☺ ☺ 2. a. Measure the length and width of the mattress on your bed in feet. What is the length and width, rounded to the nearest whole foot?

Answer: length = ____ feet, width = ___ feet

b. Make a square out of cardboard that is 1 foot on each side. Use this to find the area of your mattress, in square feet.

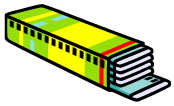
Answer: The area is ___ square feet.

c. Is there a quick way to find the area of a mattress if you know the length and the width? Explain:

☺ ☺ ☺ ☺ 3. Frank bought 5 packages of hotdogs. Each package has 8 hotdogs. He ate some hotdogs this week. Let *h* represent the number of hotdogs he ate. Write an expression to show how many hot dogs he has left.

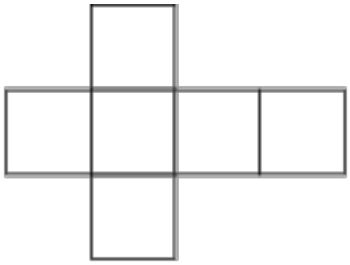
Answer: He has this many hot dogs left: _____

☺ 4. Juan has 8 packs of gum. There are 5 pieces of gum in each package. How many pieces of gum does he have in all?



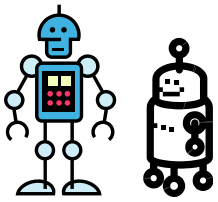
Answer:_____

☺ ☺ 5. Trace over the figure below. Then cut out your tracing and fold it on the inside lines so it makes a 3-dimensional shape. Put tape on it so it stays folded. What is this shape called?



Answer: It's called a _____

☺ ☺ ☺ 6. You have two robots that will do what you tell them to do with numbers. You set the robot on the left to always triple a number it gets as input. You set the robot on the right to always subtract 1 from a number it gets as input. Then you hook the robots up together so that you tell a number to the one on the left, then that robot outputs his number to the robot on the right, and that robot gives the final output. If you whisper "1" to the left robot, it then outputs 3×1 or "3" to the right robot, and the right robot outputs 3 – 1 or "2". Fill in the missing input-output chart below, for different input numbers.



Input number on left	Final output number
1	2
4	___
2	___
10	___

☺ 7. A penny is 0.01 of a dollar. So a nickel is what decimal part of a dollar?

Penny = $0.01

Nickel = $____