Name RELEASED FORM

Grade 3

Form W

W

North Carolina

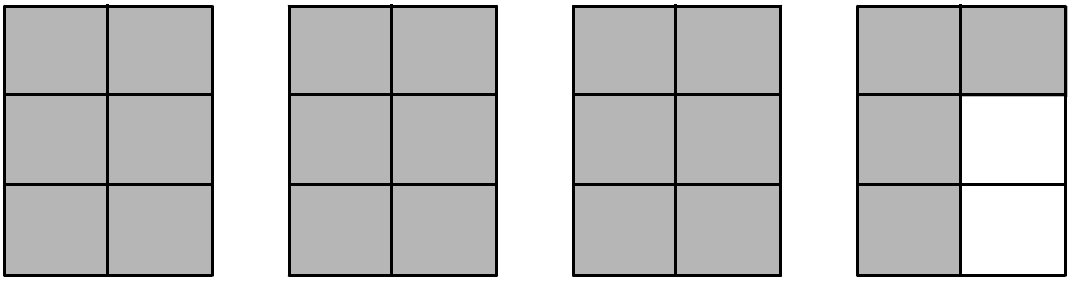
End-of-Grade Tests–Grade 3

Mathematics—Calculator Active

Mathematics—Calculator Inactive (page 20)

Public Schools of North Carolina
www.ncpublicschools.org
State Board of Education
Department of Public Instruction
Division of Accountability Services/North Carolina Testing Program
Raleigh, North Carolina 27699-6314

1. Which mixed number represents the shaded parts of the model?



A $3\frac{2}{6}$

B $3\frac{4}{6}$

C $4\frac{2}{6}$

D $4\frac{4}{6}$

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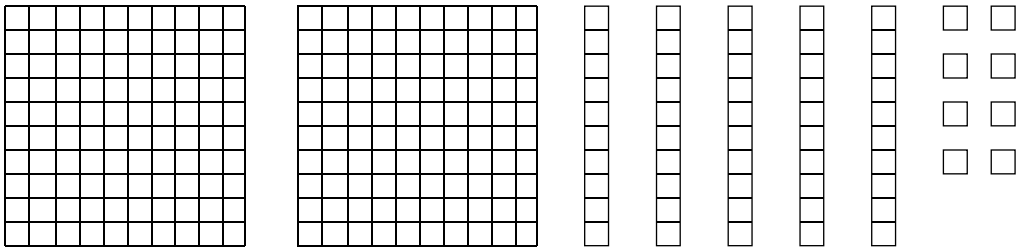
2. Which number is 100 more than the model shown below?



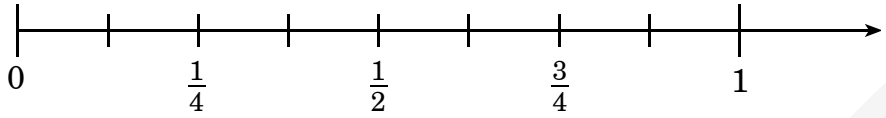
A 158

B 258

C 358

D 385

3. The number line is divided into equal parts from 0 to 1.



What fraction is equal to $\frac{3}{4}$?

A $\frac{6}{8}$

B $\frac{4}{8}$

C $\frac{3}{8}$

D $\frac{1}{8}$

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4. Kim, Mike, Larry, and Alice sold some of their cards at a yard sale.

Child	Cards before Sale	Cards after Sale
Kim	430	181
Mike	789	671
Larry	931	688
Alice	842	579

According to the chart, who sold the ***most*** cards?

A Kim

B Mike

C Larry

D Alice

5. Mrs. Galloway had 1 gallon of juice in a container. She poured out 3 cups of juice. How many cups of juice does she have left in the gallon container?

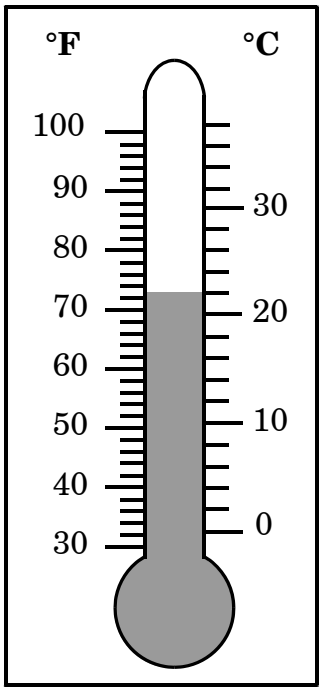
A 5

B 13

C 14

D 15

6. The thermometer shows the temperature of a classroom.



What is the temperature of the room in degrees Celsius?

A 72°C

B 71°C

C 22°C

D 21°C

7. Mrs. Gainey needs to buy string for 5 students to do a science activity. Each student needs 2 feet of blue string and 1 foot of red string. How many yards of string does Mrs. Gainey need to buy?

A 3 yards

B 4 yards

C 5 yards

D 8 yards

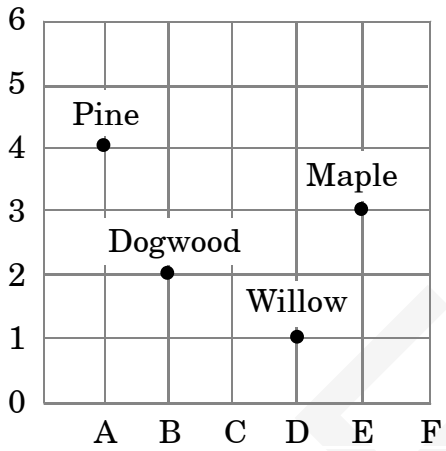
8. This table shows where the third-grade class plans to plant some new trees.

Planting Plan

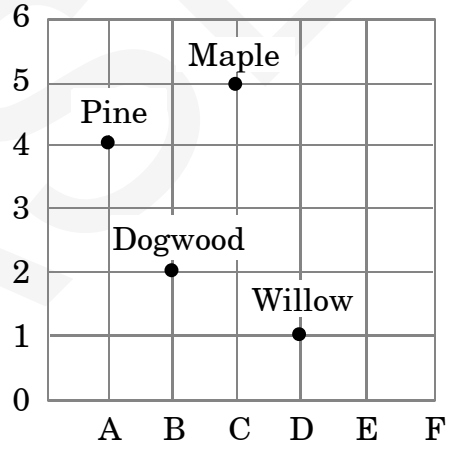
Tree	Location
Maple	(E, 3)
Dogwood	(B, 2)
Pine	(D, 1)
Willow	(A, 4)

Which grid shows the ordered pairs plotted correctly?

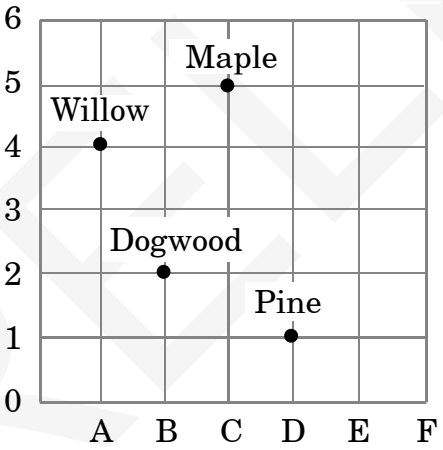
A



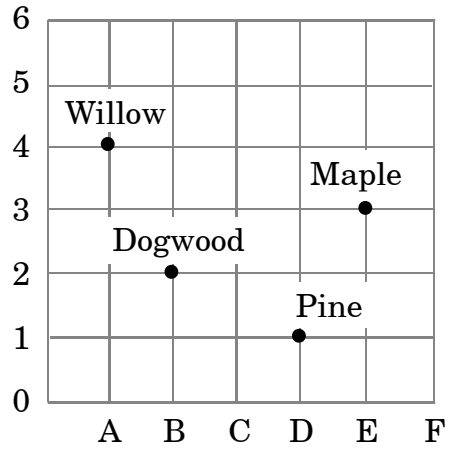
B



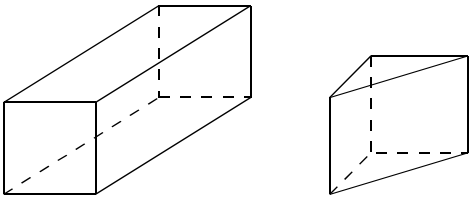
C



D



9. What do the figures below have in common?



A Both have at least one triangular face.

B Both have at least one rectangular face.

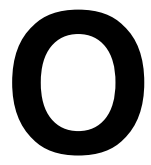
C Both have six faces.

D Both have eight vertices.

10. Which letter has only one line of symmetry?

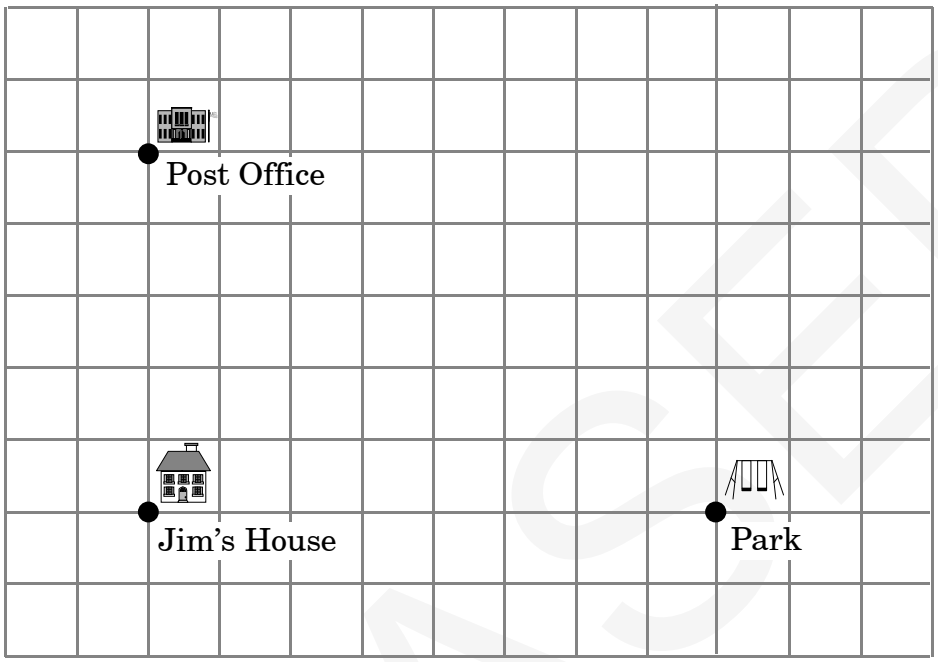
A 

B 

C 

D 

11. On the map below, each side of each grid square represents 1 kilometer.



How much farther does Jim live from the Park than he lives from the Post Office?

A 3 km

B 5 km

C 8 km

D 13 km

12. Ellen is making a sandwich using 3 slices of meat. She has one slice each of turkey, ham, and chicken. In how many different orders can she stack the slices?

A 9

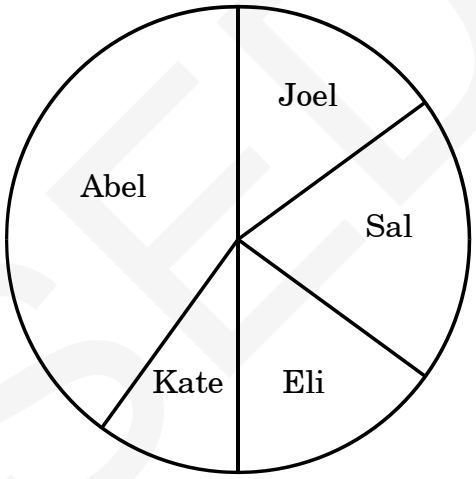
B 7

C 6

D 3

13. ***About*** what part of the money earned for the field trip did Abel and Joel earn altogether?

Money Earned for Field Trip



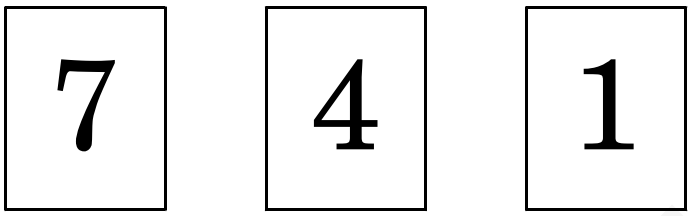
A $\frac{1}{2}$

B $\frac{1}{3}$

C $\frac{1}{6}$

D $\frac{1}{8}$

14. Lynn has these three number cards in a bag.



Without looking, she will take all of the cards out of the bag one at a time. What is the probability that she will take out the 4 last?

A $\frac{2}{6}$

B $\frac{3}{6}$

C $\frac{4}{6}$

D $\frac{5}{6}$

---

15. What is the missing number?

$$27 \div \square = 3$$

A 8

B 9

C 24

D 30

16. Which number is 15 less than 43?

A 58

B 38

C 32

D 28

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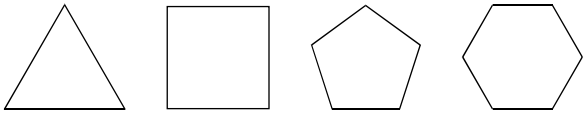
17. Mr. Sanchez drew this pattern of shapes on the chalkboard.



first second third fourth

He asked his class to find the rule for his pattern. Which answer is correct?

A All the figures have 1 less side each time.

B All the figures have 1 less angle each time.

C All the figures have 1 more acute angle each time.

D All the figures have 1 more side each time.

18. What are the next three numbers in this pattern?

1,878	1,882	1,886	1,890	1,894			

A

1,898	1,802	1,806

B

1,898	1,902	1,906

C

1,900	1,902	1,904

D

1,900	1,908	1,918

19. Which table below correctly shows the numbers of pages each student read, from ***least*** to ***greatest***?

A

Name	Number of Pages
Lee	5,607
Bob	5,846
Jill	5,623
Kim	5,442

B

Name	Number of Pages
Kim	5,442
Lee	5,607
Jill	5,623
Bob	5,846

C

Name	Number of Pages
Kim	5,442
Jill	5,623
Bob	5,846
Lee	5,607

D

Name	Number of Pages
Lee	5,607
Kim	5,442
Jill	5,623
Bob	5,846

20. Each day the zookeeper recorded how many people visited the zoo.

Zoo Attendance

Day	Attendance
Monday	2,956
Tuesday	1,811
Wednesday	1,040
Thursday	3,101
Friday	2,616

How many people visited the zoo on Wednesday?

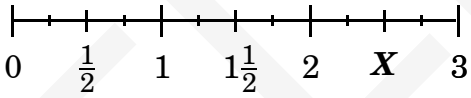
A one thousand forty

B one hundred forty

C ten forty

D one thousand four hundred

21. What number can replace the ***X*** on this number line?



A $\frac{1}{2}$

B 2

C $2\frac{1}{2}$

D $2\frac{3}{4}$

22. Which number belongs in the gray box to make a true number sentence?

$3 \times 2 \times 9 = 2 \times \square \times 3$

A 2

B 6

C 9

D 14

23. How many inches are equal to 4 feet?

A 48

B 36

C 24

D 12

24. Which could be the measurement of the height of a tall tree?

A 10 meters

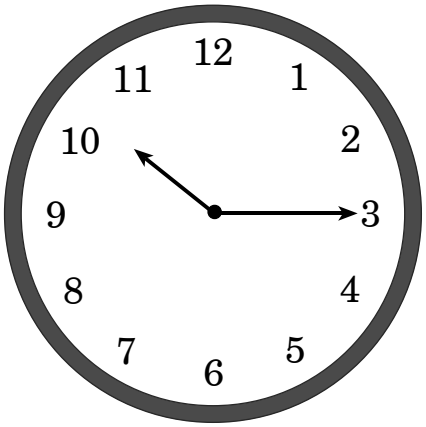
B 10 kilometers

C 10 inches

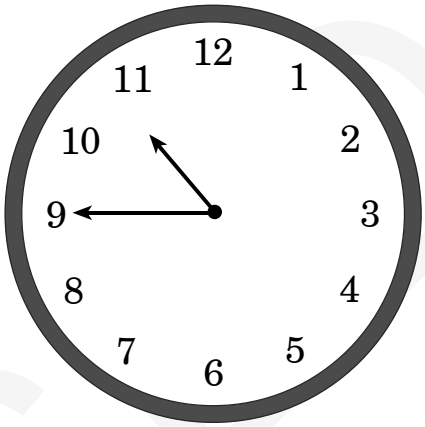
D 10 miles

25. Katie has a gymnastics class every Saturday morning for 2 hours and 45 minutes. The class starts at 8:30. Which clock shows the time when Katie's class ends?

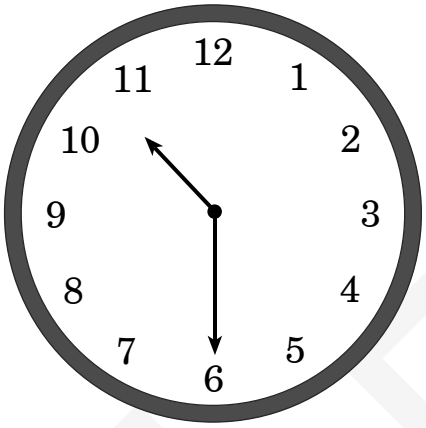
A



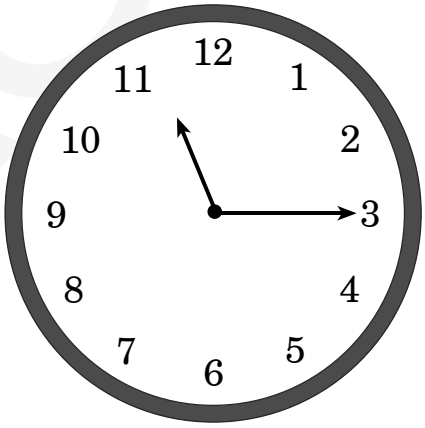
B



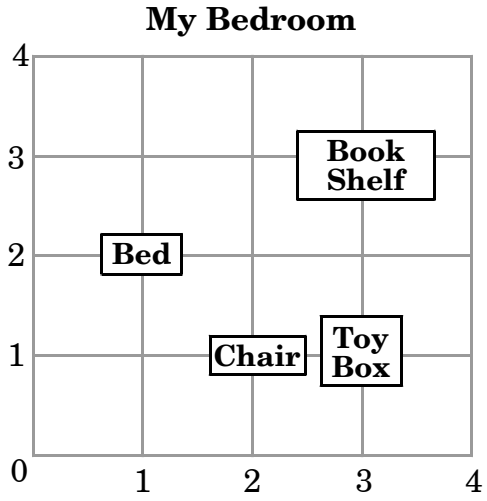
C



D



26. Joseph made a diagram of his bedroom.



Which ordered pair shows where Joseph's toy box is located?

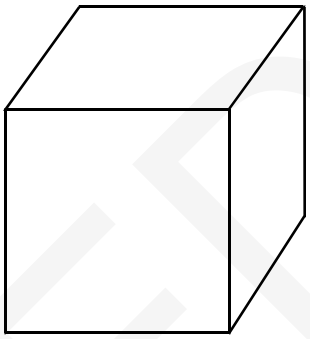
A $(1, 3)$

B $(2, 1)$

C $(3, 1)$

D $(3, 3)$

27. How many edges does a cube have?



A 12

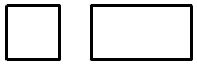
B 8

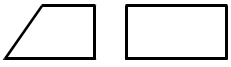
C 6

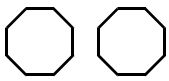
D 4

28. Bobby drew two congruent shapes that each had at least 4 sides. Which pair of shapes could Bobby have drawn?

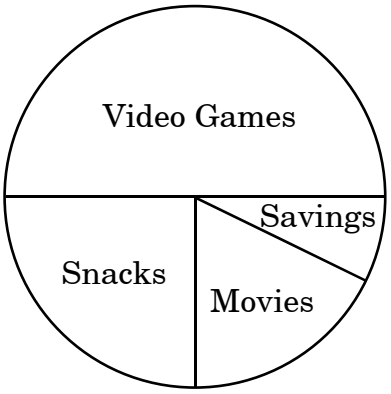
A 

B 

C 

D 

29. The circle graph below shows how Ken spends his monthly allowance.



Which statement below is correct?

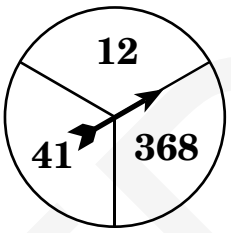
A Ken spends 2 times as much money on video games as he does on snacks.

B Ken spends one-half as much money on movies as he does on snacks.

C Ken spends 2 times as much money on video games as he saves.

D Ken saves one-half as much money as he spends on video games.

30. John spins this fair spinner once.



What is the probability of landing on an even number?

A 1 out of 2

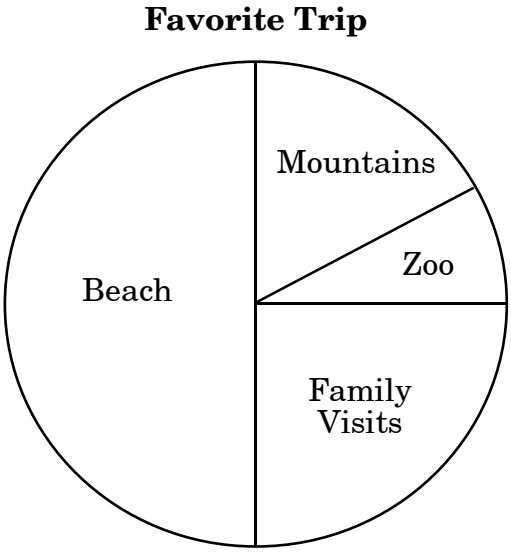
B 1 out of 3

C 2 out of 3

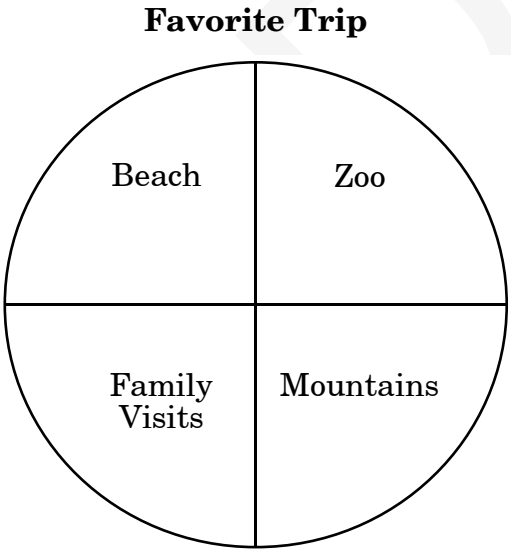
D 2 out of 5

31. In a survey, $\frac{1}{4}$ of the students chose Family Visits as their favorite trip, and $\frac{1}{2}$ of the students chose Beach. The other students chose either Mountains or Zoo. Which circle graph shows these results?

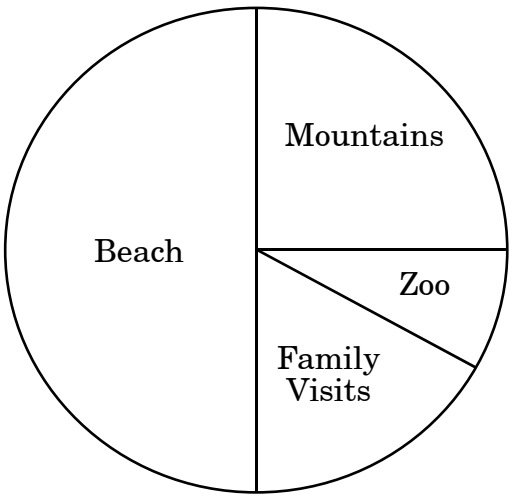
A



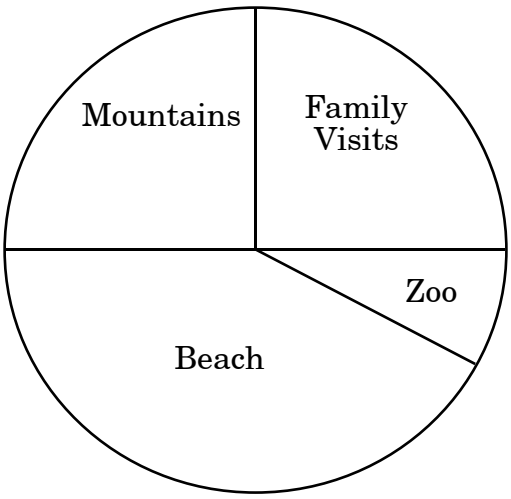
B



C



D



32. Kevin has an apple, an orange, and a banana. He is only allowed to have 2 fruits for his snack. How many different combinations of 2 fruits could Kevin choose for his snack?

A 2

B 3

C 6

D 9

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33. Sam used a pattern for the table below.

First Number	Second Number	Third Number
12	4	7
10	2	5
15	7	10
17	9	12

What rules did he use to go from the first number to the second and from the second number to the third?

A add 8, subtract 3

B add 8, add 3

C subtract 8, subtract 3

D subtract 8, add 3

34. Kevin wrote the following number pattern on the board.

16, 32, 64, 128, 256, . . .

What is the rule Kevin used?

A add 16

B add 16, then add 32

C double each number

D add last two numbers

35. John planted corn in rows. He planted 16 corn plants in the first row, 24 in the second row, and 32 in the third row. If the pattern continues, how many corn plants will he plant in the fifth row?

A 40

B 48

C 56

D 72

36. Which choice will give the value of the $\triangle$?

$$\triangle - 32 = 7$$

A $32 - 7$

B $7 - 32$

C 32×7

D $7 + 32$

End of Mathematics—
Calculator Active

1. The library has 7,126 books. The library will purchase exactly one hundred more books. How many books will the library have after the books are purchased?

   A 7,136

   B 7,137

   C 7,226

   D 8,126

2. There are 20 seeds in a package. If 5 seeds are put in each flower pot, how many flower pots are needed to plant all of the seeds?

   A 4

   B 5

   C 15

   D 25

3. A box of candy has 12 rows. There are 6 pieces of candy in each row. How many pieces of candy are in the box?

   A 6

   B 18

   C 62

   D 72

4. On Saturday, 2,759 people went to the afternoon concert and 6,387 people went to the night concert. ***About*** how many people went to the concert on Saturday?

   A 4,000

   B 6,000

   C 8,000

   D 9,000

5. Dean had 1,062 pennies in his bank. Shawn had 889. How many more pennies did Dean have than Shawn?

   A 173

   B 223

   C 227

   D 283

6. Jerry keeps his rock collection in 7 boxes. Each box weighs about 6 or 7 pounds. How much does Jerry's whole rock collection weigh?

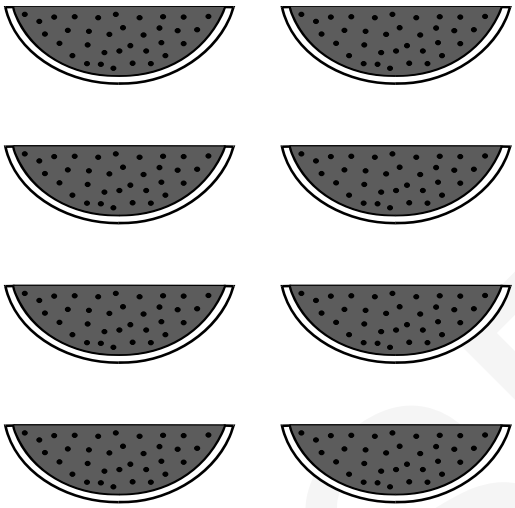
   A between 50 and 60 pounds

   B between 40 and 50 pounds

   C between 30 and 40 pounds

   D between 20 and 30 pounds

7. Gina's mom cut a watermelon into 8 equal pieces.



Gina ate 3 pieces. What fraction of the watermelon was left?

A $\frac{3}{8}$

B $\frac{4}{8}$

C $\frac{5}{8}$

D $\frac{8}{3}$

8. Mr. Washington's class is going on a field trip. In each of the 2 vans there will be 7 children and 1 adult. In each of the 4 cars there will be 4 children and 1 adult. How many people are going on the field trip?

A 17

B 30

C 36

D 38

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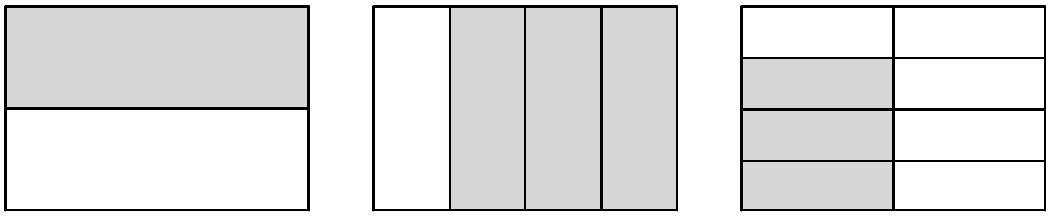
9. Use the three models to help answer the question below.



Which statement is true?

A $\frac{1}{2} > \frac{3}{4}$

B $\frac{3}{4} > \frac{1}{2}$

C $\frac{3}{8} > \frac{1}{2}$

D $\frac{3}{8} > \frac{3}{4}$

10. In the cafeteria at North Lake Elementary, there are 8 tables for each grade.

Students in Each Grade at North Lake Elementary

Kindergarten	71
First Grade	64
Second Grade	81
Third Grade	63
Fourth Grade	80
Fifth Grade	72

Which grade can have ***exactly*** 9 students sitting at each table?

A First Grade

B Second Grade

C Third Grade

D Fifth Grade

11. There will be 10 to 12 people at a picnic. Each person will eat 2 hamburgers. There are 8 hamburgers in a package. How many packages are needed?

A 2

B 3

C 4

D 5

12. What is the value of the ☐ in this number sentence?

$16 + \square = 42$

A 26

B 34

C 36

D 58

13. Roy made this pattern:

⊗ ○ □ ⊗ ○ △ ⊗ ○ □ ⊗ ○ △ ⊗ ○ □ ⊗, ___, ___, ?

If the pattern continues, which shape will be in the last blank?

A ○

B ⊗

C △

D □

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14. What is the seventh number in this pattern?

5, 7, 10, 14, ___, ___, ?

A 18

B 24

C 26

D 32

End of Mathematics—
Calculator Inactive

North Carolina Test of Mathematics
Grade 3 Form W RELEASED Fall 2009
Answer Key

CALCULATOR ACTIVE

Item Number	Correct Answer	Goal
1	B	1 — Number and Operations
2	C	1 — Number and Operations
3	A	1 — Number and Operations
4	D	1 — Number and Operations
5	B	2 — Measurement
6	C	2 — Measurement
7	C	2 — Measurement
8	D	3 — Geometry
9	B	3 — Geometry
10	A	3 — Geometry
11	A	3 — Geometry
12	C	4 — Data Analysis and Probability
13	A	4 — Data Analysis and Probability
14	A	4 — Data Analysis and Probability
15	B	5 — Algebra
16	D	5 — Algebra
17	D	5 — Algebra
18	B	5 — Algebra
19	B	1 — Number and Operations
20	A	1 — Number and Operations
21	C	1 — Number and Operations
22	C	1 — Number and Operations
23	A	2 — Measurement
24	A	2 — Measurement
25	D	2 — Measurement
26	C	3 — Geometry
27	A	3 — Geometry
28	D	3 — Geometry
29	A	4 — Data Analysis and Probability
30	C	4 — Data Analysis and Probability
31	A	4 — Data Analysis and Probability
32	B	4 — Data Analysis and Probability
33	D	5 — Algebra
34	C	5 — Algebra
35	B	5 — Algebra
36	D	5 — Algebra

North Carolina Test of Mathematics
Grade 3 Form W RELEASED Fall 2009
Answer Key

CALCULATOR INACTIVE

Item Number	Correct Answer	Goal
1	C	1 — Number and Operations
2	A	1 — Number and Operations
3	D	1 — Number and Operations
4	D	1 — Number and Operations
5	A	1 — Number and Operations
6	B	1 — Number and Operations
7	C	1 — Number and Operations
8	C	1 — Number and Operations
9	B	1 — Number and Operations
10	D	1 — Number and Operations
11	B	1 — Number and Operations
12	A	5 — Algebra
13	B	5 — Algebra
14	D	5 — Algebra

North Carolina Test of Mathematics
Grade 3 Form W RELEASED Fall 2009
Raw to Scale Score Conversion

Raw Score	Scale Score
0	314
1	315
2	315
3	316
4	317
5	318
6	319
7	320
8	321
9	322
10	323
11	324
12	325
13	327
14	328
15	329
16	330
17	331
18	332
19	334
20	335
21	336
22	337
23	338
24	339
25	339
26	340
27	341
28	342
29	343
30	344
31	345
32	345
33	346
34	347
35	348
36	349
37	349
38	350
39	351
40	352
41	353

42	354
43	355
44	356
45	358
46	359
47	361
48	363
49	365
50	369