

GRADE 3
Mathematics

Administered May 2016

RELEASED

STAAR GRADE 3 MATHEMATICS REFERENCE MATERIALS



LENGTH

Customary

1 mile (mi) = 1,760 yards (yd)

1 yard (yd) = 3 feet (ft)

1 foot (ft) = 12 inches (in.)

Metric

1 kilometer (km) = 1,000 meters (m)

1 meter (m) = 100 centimeters (cm)

1 centimeter (cm) = 10 millimeters (mm)

VOLUME AND CAPACITY

Customary

1 gallon (gal) = 4 quarts (qt)

1 quart (qt) = 2 pints (pt)

1 pint (pt) = 2 cups (c)

1 cup (c) = 8 fluid ounces (fl oz)

Metric

1 liter (L) = 1,000 milliliters (mL)

WEIGHT AND MASS

Customary

1 ton (T) = 2,000 pounds (lb)

1 pound (lb) = 16 ounces (oz)

Metric

1 kilogram (kg) = 1,000 grams (g)

1 gram (g) = 1,000 milligrams (mg)

TIME

1 year = 12 months

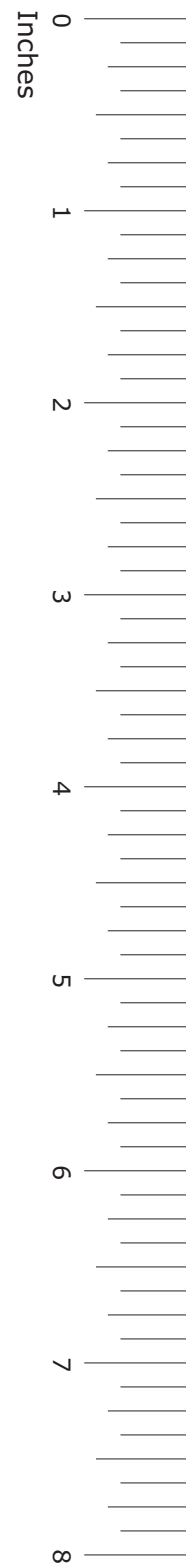
1 year = 52 weeks

1 week = 7 days

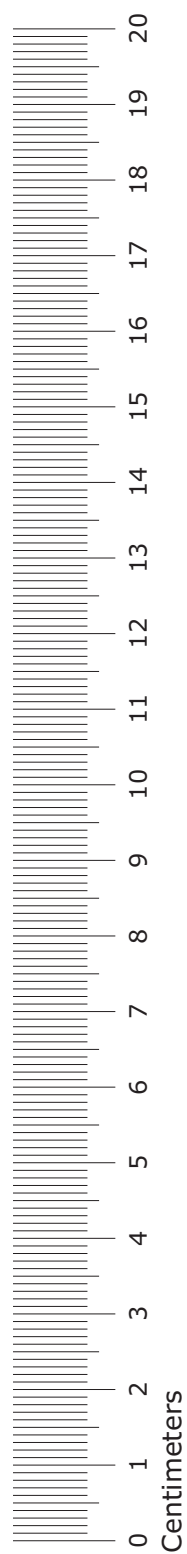
1 day = 24 hours

1 hour = 60 minutes

1 minute = 60 seconds

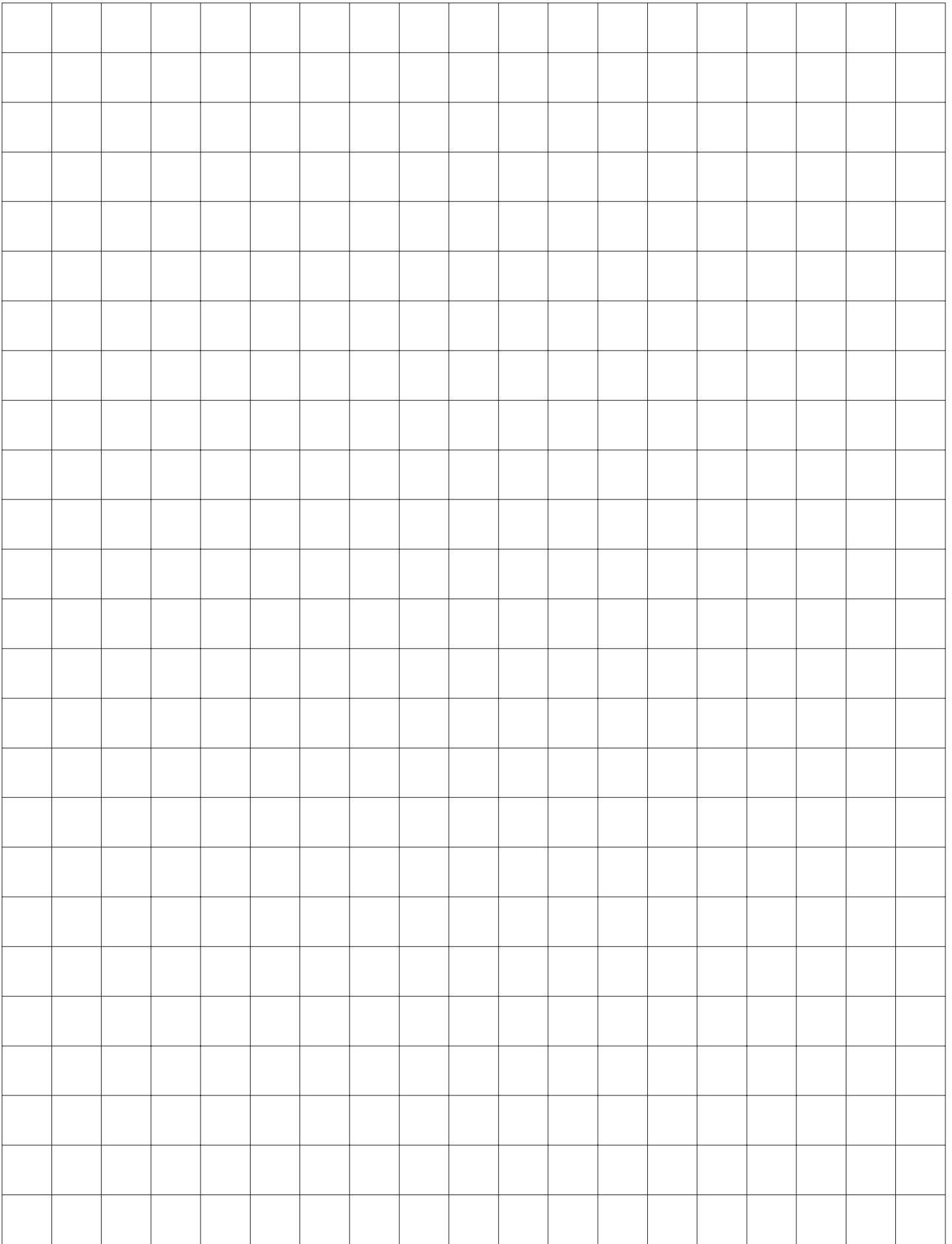


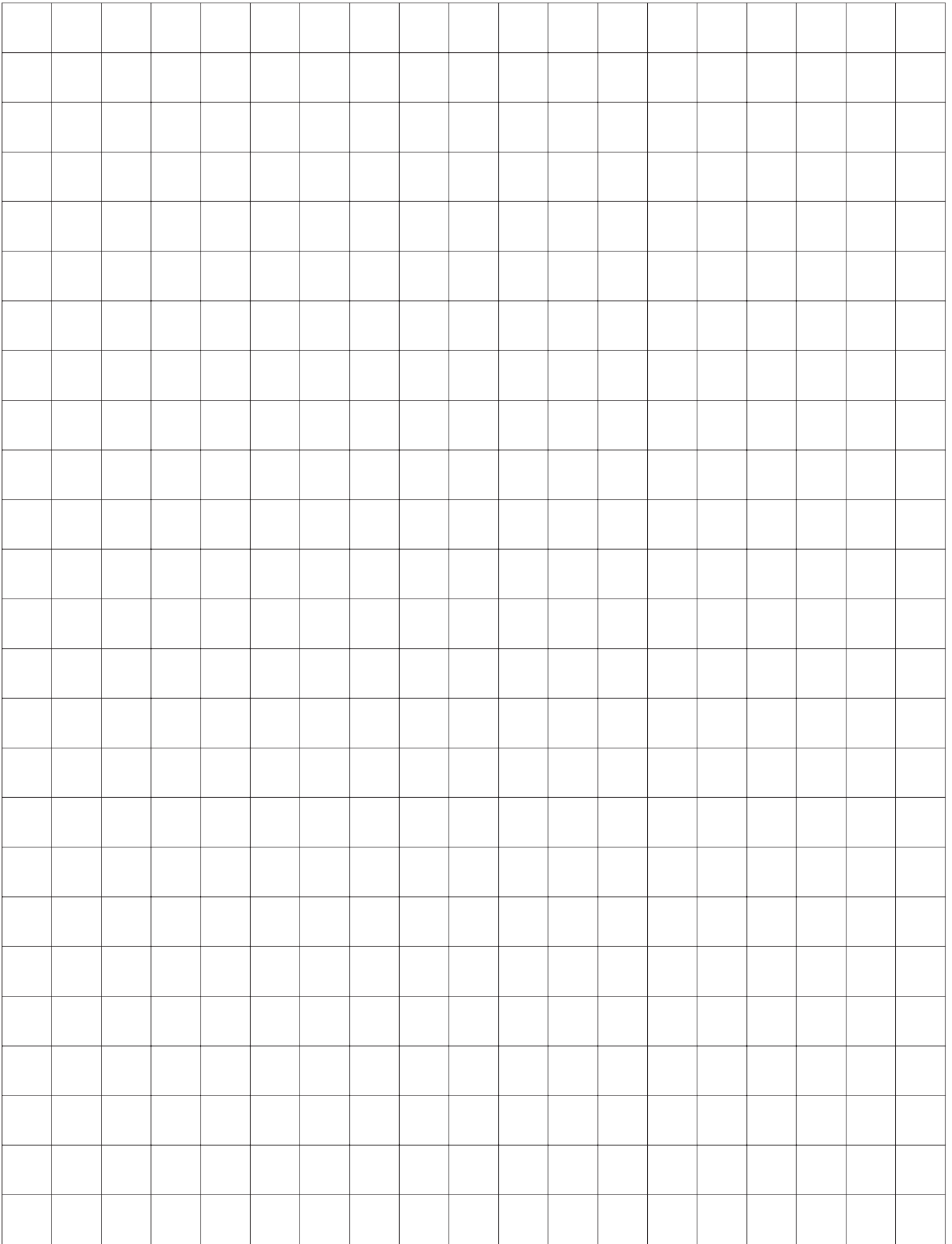
STAAR GRADE 3 MATHEMATICS REFERENCE MATERIALS



This page shows only
the metric ruler.





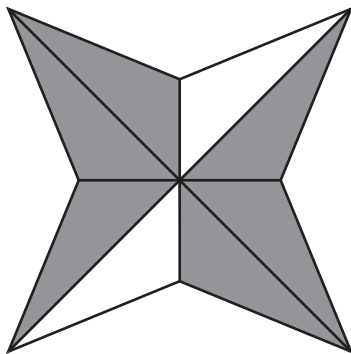


MATHEMATICS

DIRECTIONS

Read each question carefully. For a multiple-choice question, determine the best answer to the question from the four answer choices provided. For a griddable question, determine the best answer to the question. Then fill in the answer on your answer document.

- 1 Anissa shaded part of the figure shown below.



What fraction of the figure is shaded?

- A $\frac{6}{8}$
- B $\frac{1}{6}$
- C $\frac{2}{8}$
- D $\frac{2}{6}$

2 The members of a gym use 98 towels every day. How many towels are used in 7 days?

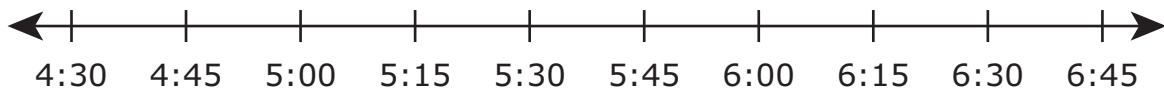
F 636

G 14

H 686

J 91

3 Thomas put a ham in the oven at 4:45 P.M. After 15 minutes he put a cake in the oven. The ham and the cake were in the oven together for 60 minutes. Then Thomas took them both out of the oven.



At what time did Thomas take both the ham and cake out of the oven?

A 5:45 P.M.

B 6:30 P.M.

C 5:15 P.M.

D 6:00 P.M.

4 Rita had two boxes of ribbons.

- She had 37 large ribbons in the first box.
- She had 56 small ribbons in the second box.
- She gave 28 of the large ribbons to her sister.

Which number sentence can be used to find the number of ribbons Rita had left in the two boxes?

F $56 + 28 + 37 = \square$

G $37 - 28 + 56 = \square$

H $37 + 28 - 56 = \square$

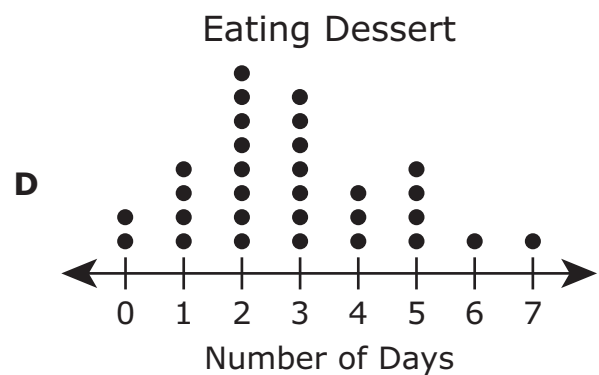
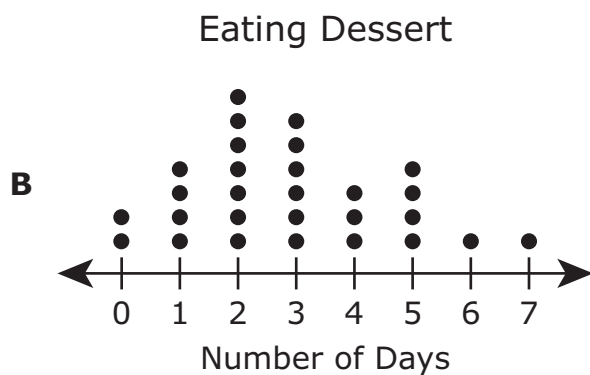
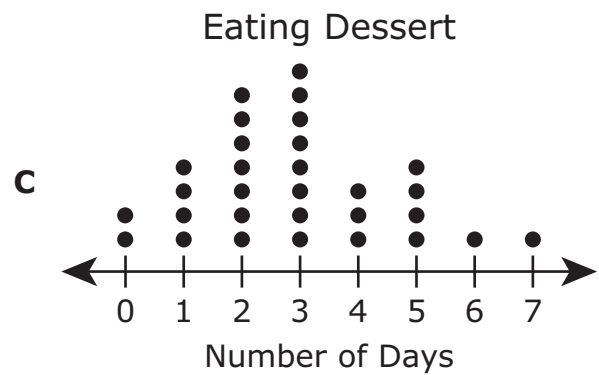
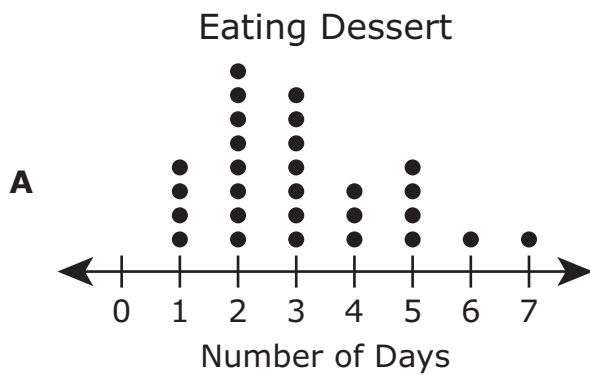
J $56 + 28 - 37 = \square$

- 5 The frequency table shows the results of a survey about how many days per week some families eat dessert.

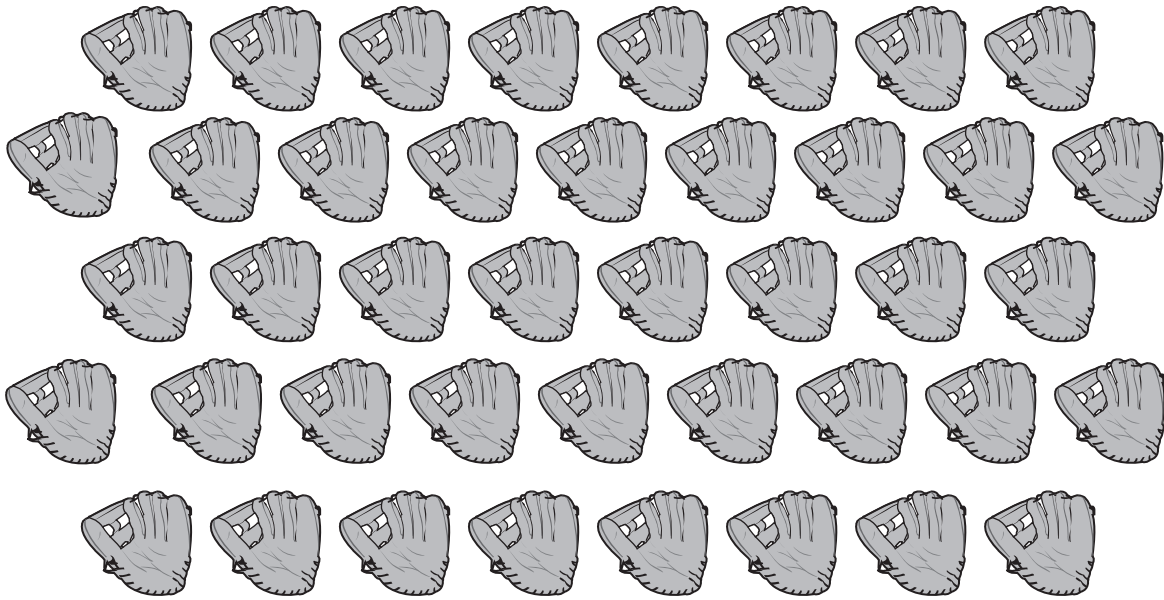
Eating Dessert

Number of Days	Frequency
0	II
1	IIII
2	IIII III
3	IIII II
4	III
5	IIII
6	I
7	I

Which dot plot represents the data in the table?



6 Daria has 42 baseball gloves in her store.



She will put these gloves on 7 shelves. She will put the same number of gloves on each shelf. How many gloves will Daria put on each shelf?

- F** 8, because $42 \div 7 = 8$
- G** 9, because $42 \div 7 = 9$
- H** 6, because $42 \div 7 = 6$
- J** 7, because $42 \div 7 = 7$

- 7 The table below shows the number of each kind of magazine sold in a store during one month.

Magazines Sold

Kind of Magazine	Number Sold
Fashion	1,728
News	1,723
Entertainment	2,114
Sports	2,186

Which list shows the kinds of magazines in order from greatest to least number sold?

- A Sports, entertainment, fashion, news
- B Fashion, sports, entertainment, news
- C Sports, fashion, news, entertainment
- D Fashion, news, entertainment, sports

-
- 8 Wanda traveled on an airplane three times last year.

- In January she traveled 278 miles.
- In April she traveled 652 miles.
- In September she traveled 767 miles.

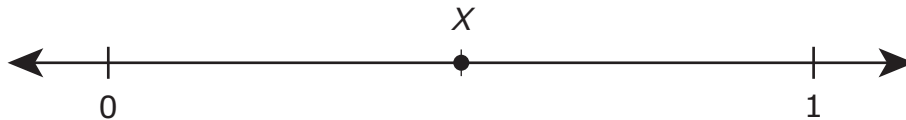
How many more miles did Wanda travel in January and April combined than she traveled in September?

- F 930 mi
- G 147 mi
- H 163 mi
- J 237 mi

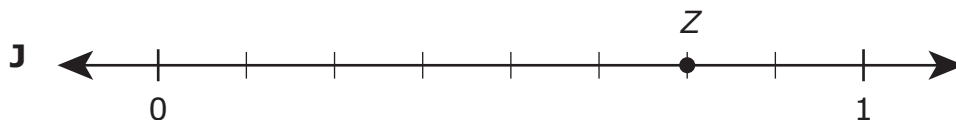
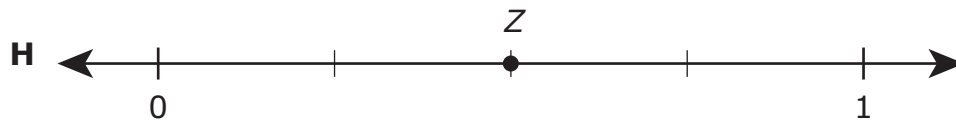
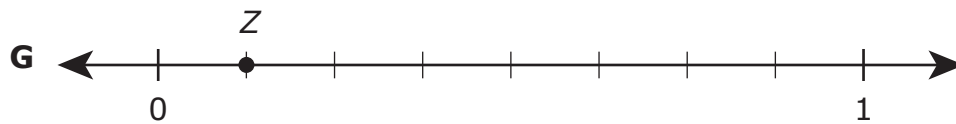
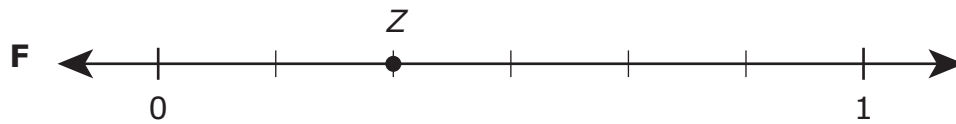
9 Patrick's class collected boxes of food for charity. Which unit of measurement should be used to measure the weight of the boxes of food?

- A Quarts
- B Pounds
- C Gallons
- D Fluid ounces

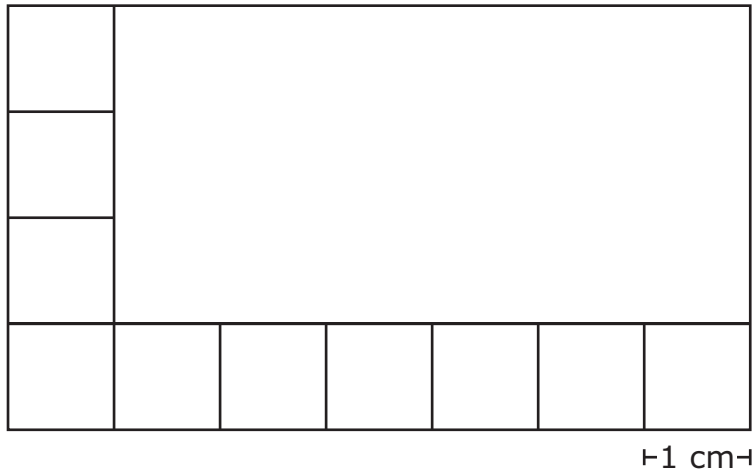
10 Point X on the number line represents a fraction.



On which number line does point Z represent a fraction equivalent to the one represented by point X ?



- 11** Felicia started placing square tiles inside a rectangle, as shown in the diagram. Each square tile has a side length of 1 cm.



She continued placing square tiles without any overlaps to cover the rectangle. What is the area of the rectangle in square centimeters?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 12** Campers at a lake rented 18 more canoes than paddleboats each week during five weeks. Which table could show the numbers of canoes and paddleboats rented during these five weeks?

Canoes and Paddleboats

F

Number of Canoes	Number of Paddleboats
72	90
37	55
61	79
85	103
68	86

Canoes and Paddleboats

H

Number of Canoes	Number of Paddleboats
72	54
37	19
61	43
85	67
68	50

Canoes and Paddleboats

G

Number of Canoes	Number of Paddleboats
72	54
37	72
61	90
85	108
68	126

Canoes and Paddleboats

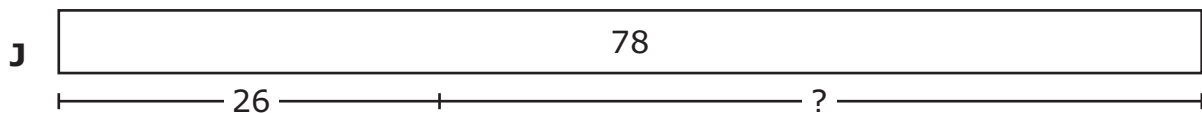
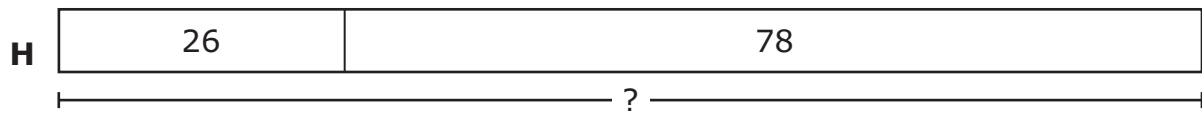
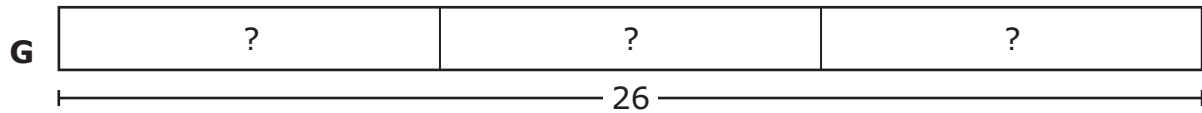
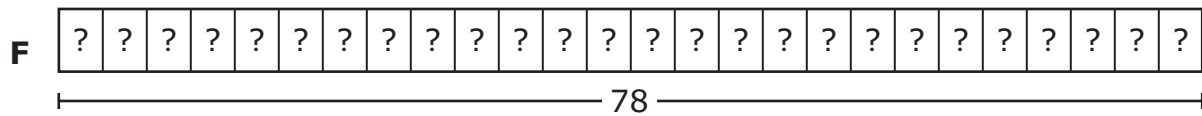
J

Number of Canoes	Number of Paddleboats
72	18
37	36
61	54
85	72
68	90

-
- 13** Which expression represents the number 867?

- A** $80 + 60 + 70$
- B** $800 + 6 + 7$
- C** $500 + 300 + 50 + 10 + 7$
- D** $500 + 300 + 60 + 70$

- 14** Edward made 26 hamburgers. He used a total of 78 pickle slices on the hamburgers. He put the same number of pickle slices on each hamburger. Which diagram shows how to find the number of pickle slices Edward put on each hamburger?



- 15** Mrs. Williams borrowed \$6,000 from a bank to pay for some home repairs. She paid \$7,500 back to the bank. Which of these is the most likely reason Mrs. Williams paid the bank more than the amount she borrowed?

- A** She made a mistake in calculating the amount she needed to pay back.
- B** She actually needed more than \$6,000 for the home repairs.
- C** She had to pay interest on the amount of money she borrowed.
- D** She had to pay sales tax on the amount of money she borrowed.

- 16** Bailey and Dylan each had pies that were the same size. Bailey ate $\frac{1}{3}$ of his pie. Dylan ate $\frac{1}{4}$ of his pie. Which statement is true?
- F** The boys ate the same amount of pie, because both fractions have a numerator of 1.
 - G** Bailey ate more pie, because each slice of a pie cut into 3 equal parts is larger than each slice of a pie cut into 4 equal parts.
 - H** Dylan ate more pie, because a denominator of 4 is larger than a denominator of 3.
 - J** There is not enough information to determine who ate more pie.
-

- 17** A group of figures is shown.

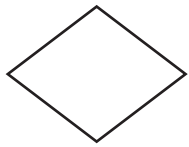


Figure V

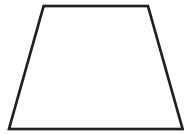


Figure W



Figure X

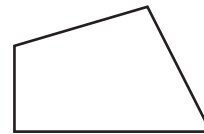


Figure Y

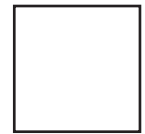


Figure Z

Which of these figures do **not** appear to be a rhombus, trapezoid, rectangle, or square?

- A** Figures V, W, X, and Z
- B** Figures W and Y
- C** Figure Y only
- D** Figures V, X, and Z only

18 There are a total of 36 bicycles in 6 rows at a bicycle shop. There are the same number of bicycles in each row. Which equation can be used to find the number of bicycles in each row?

F $6 \times 6 = 36$

G $36 - 6 = 30$

H $36 \times 6 = 216$

J $6 + 6 = 12$

19 There are two different vegetables in a garden.

- There are 5 rows that have 16 carrot plants in each row.
- There are 72 spinach plants.

How many vegetable plants are there in the garden?

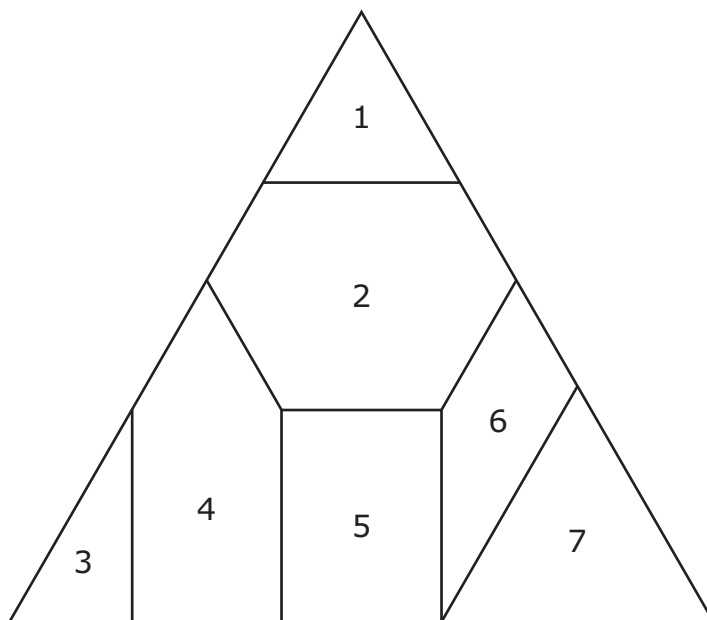
A 152

B 88

C 93

D 122

20 A figure is divided into 7 sections, as shown below.



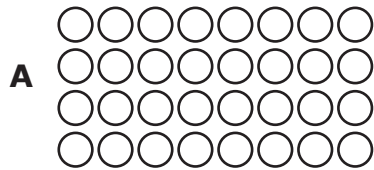
Which 2 sections are quadrilaterals?

- F** Sections 4 and 5
- G** Sections 2 and 4
- H** Sections 1 and 3
- J** Sections 5 and 6

- 21** Zachary lists some different methods he thinks he can use to solve the multiplication problem shown.

$$8 \times 4 = ?$$

Which of these is **not** a method Zachary can use to get the correct answer?



B $8 \times 8 \times 8 \times 8$

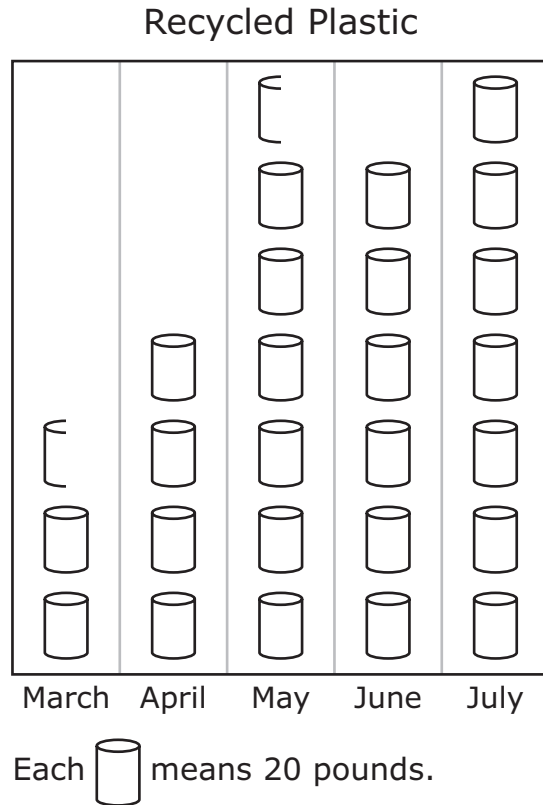
C 4, 8, 12, 16, 20, 24, 28, 32



-
- 22** Which statement about the number 34 is true?

- F** It is odd, because the digit in the tens place is odd.
- G** It is even, because the digit in the tens place is even.
- H** It is odd, because it can be divided by 3 evenly.
- J** It is even, because it can be divided by 2 evenly.

- 23** The graph below shows the number of pounds of plastic the Keller family recycled for five months.



Based on the graph, how many more pounds of plastic did the family recycle in July than in April?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

-
- 24** To make posters, 6 students each collected 8 pictures of animals. The students put 4 animal pictures on each poster they made. Which equation shows one way to find the number of posters the students made?

F $6 + 8 + 4 = 18$

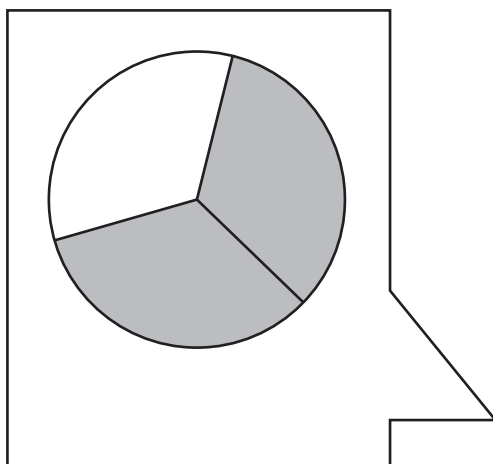
G $6 \times 8 \div 4 = 12$

H $6 \times 8 \times 4 = 192$

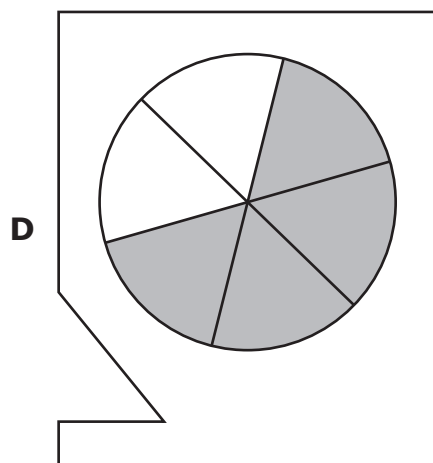
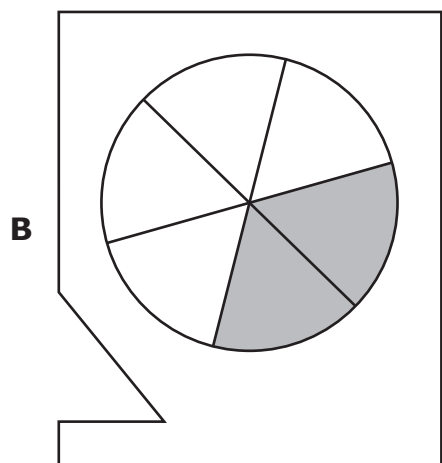
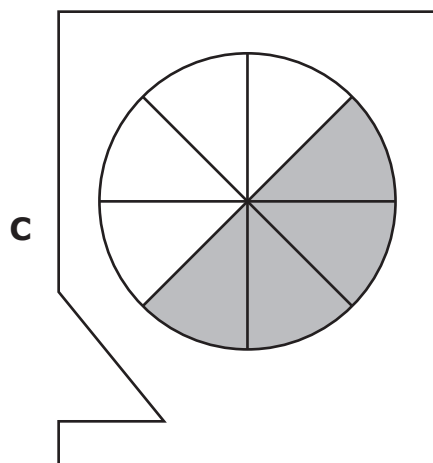
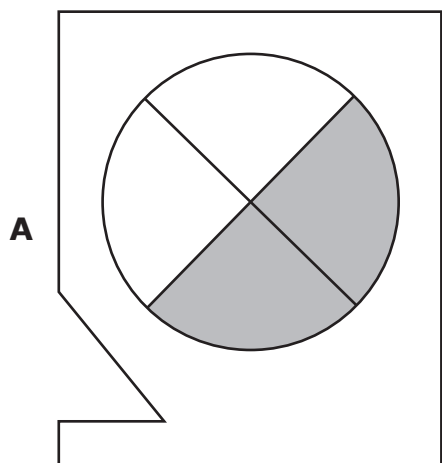
J $6 + 8 - 4 = 10$

- 25 Nelson is playing a math game. He needs to match two cards that show equivalent shaded fractions.

Nelson's Card



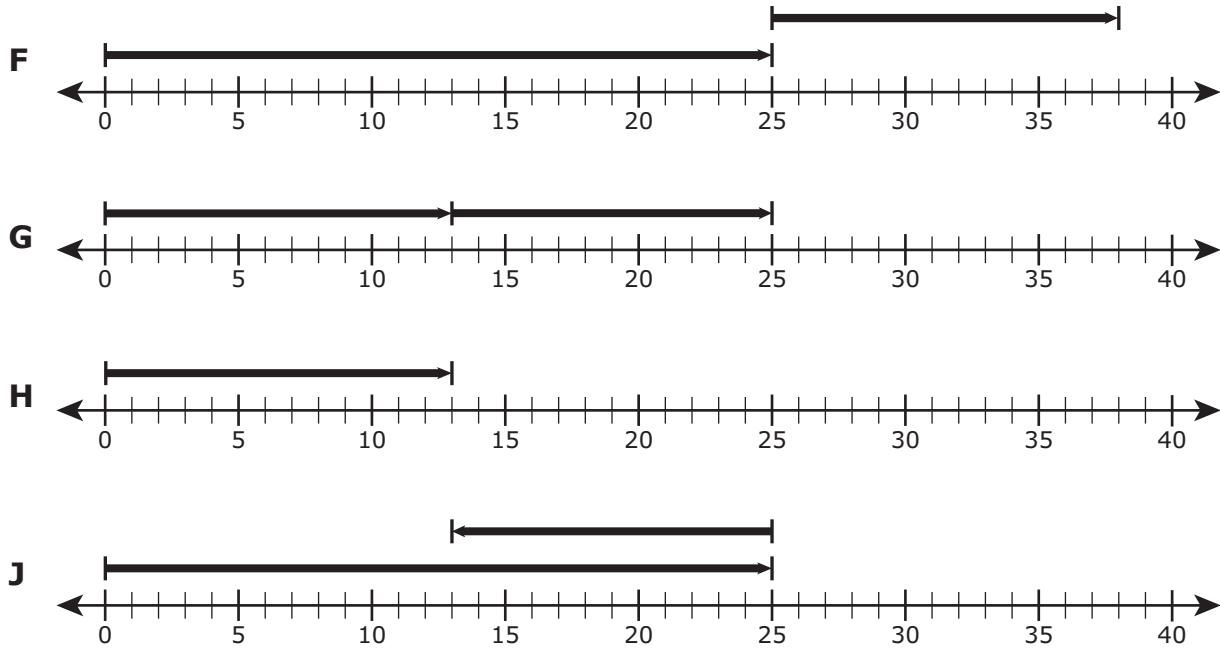
Which of these cards shows a fraction that is equivalent to the fraction on Nelson's card?



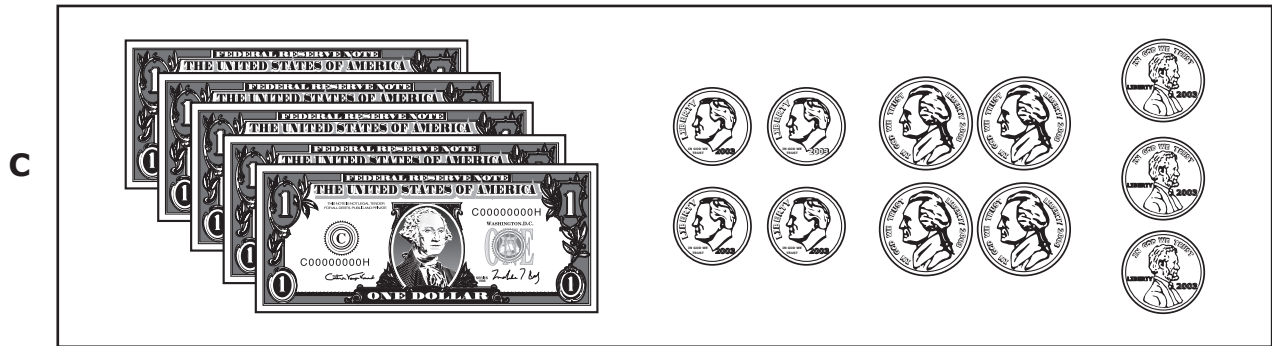
- 26** A triangular sign has a perimeter of 44 centimeters. Two of the sides are each 14 centimeters long. What is the length of the third side in centimeters?
- F** 28 cm
 - G** 16 cm
 - H** 30 cm
 - J** 14 cm
-

- 27** The sum of 8 ten thousands, 4 hundreds, and 9 tens can be expressed as what number in standard form?
- A** 80,490
 - B** 8,490
 - C** 849
 - D** 80,049

28 There were 25 people in a library. Some people left the library and went home. Then there were 13 people remaining in the library. Which number line represents one way to determine the number of people who left the library?



29 Charlie emptied his piggy bank and counted \$5.63 in savings. Which set of bills and coins could **not** be the total amount of money that was in Charlie's piggy bank?



- 30 There are 8 socks in each package sold at a shoe store. Which table shows the number of socks in different numbers of these packages?

Packages of Socks

F

Number of Packages	5	8	10	11
Number of Socks	40	48	56	64

Packages of Socks

G

Number of Packages	5	8	10	11
Number of Socks	40	64	88	112

Packages of Socks

H

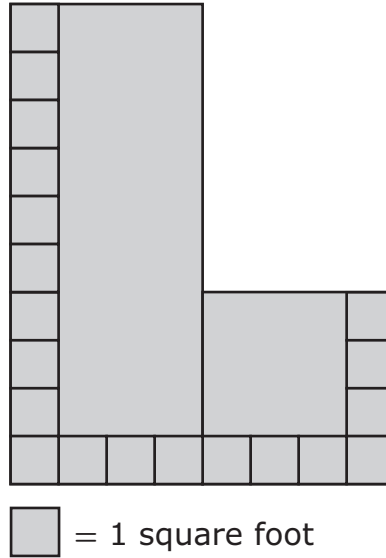
Number of Packages	5	8	10	11
Number of Socks	40	64	80	88

Packages of Socks

J

Number of Packages	5	8	10	11
Number of Socks	40	80	120	160

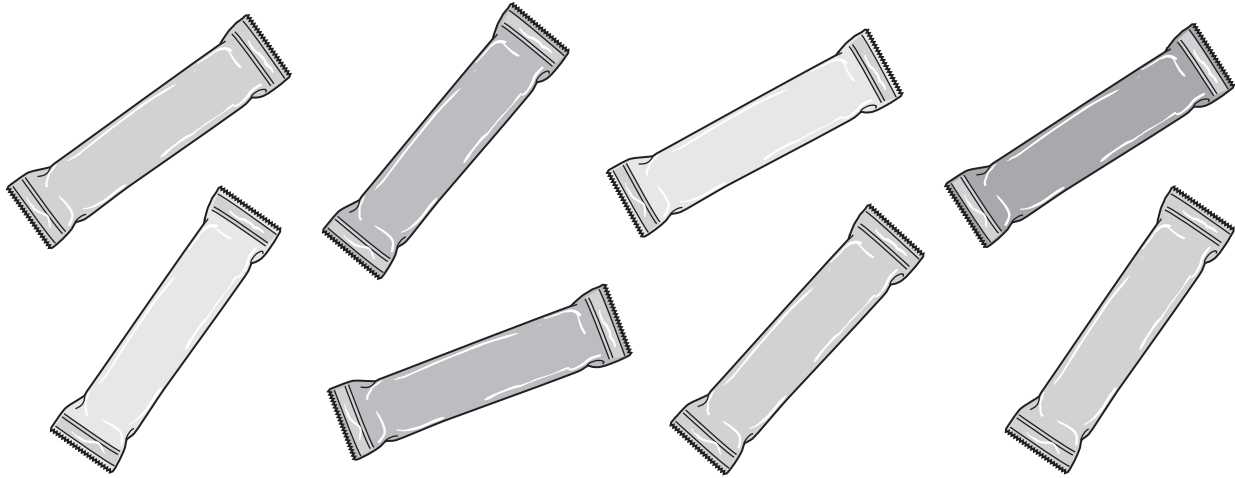
- 31** Denise planted a flower garden with a rectangular section and a square section, as shown.



What is the total area of the garden in square feet?

- A** 56 square feet
- B** 112 square feet
- C** 80 square feet
- D** Not here

- 32 Lonny opened a new box of granola bars. Lonny and three of his friends equally shared the granola bars shown in the picture.



What fraction of the granola bars did each of them get?

F $\frac{3}{8}$

G $\frac{2}{8}$

H $\frac{1}{8}$

J $\frac{4}{8}$

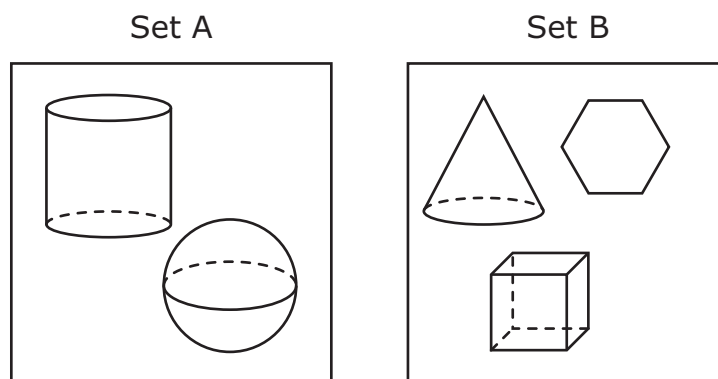
33 Vicente hung three posters in his bedroom.

- The first poster had a length of 59 centimeters.
- The second poster had a length of 92 centimeters.
- The third poster had a length of 127 centimeters.

What is the best estimate of the total length of these three posters in centimeters?

- A** 260 cm
- B** 350 cm
- C** 240 cm
- D** 280 cm

34 Sofía separated some figures into two sets. The figures in Set A have a common characteristic. The figures in Set B do not have the characteristic.



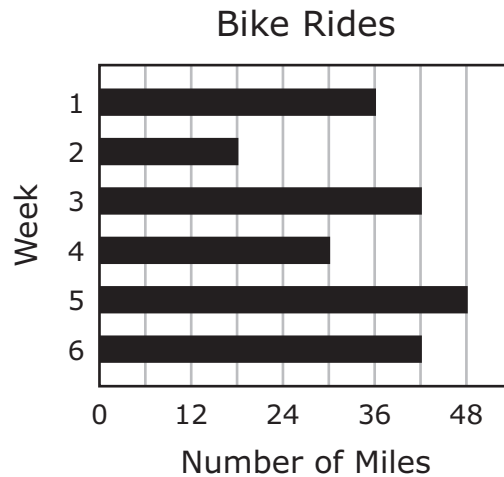
Which of these is the best description of the common characteristic of the figures in Set A?

- F** They have no vertices.
- G** They have at least one circular base.
- H** They have at least one edge.
- J** They have faces that are polygons.

35 Adyssen started with \$87 in her bank account. She put \$213 into her account last week and another \$137 this week. What is the total amount Adyssen now has in her bank account?

Record your answer and fill in the bubbles on your answer document. Be sure to use the correct place value.

- 36 The graph below shows the number of miles Lincoln rode his bike during six weeks.



Which table represents the information in the graph?

Bike Rides

F

Week	Number of Miles
1	36
2	14
3	38
4	26
5	48
6	38

Bike Rides

H

Week	Number of Miles
1	36
2	18
3	42
4	30
5	42
6	48

Bike Rides

G

Week	Number of Miles
1	36
2	24
3	48
4	36
5	48
6	48

Bike Rides

J

Week	Number of Miles
1	36
2	18
3	42
4	30
5	48
6	42

37 Ms. Losoya has 72 index cards. She will arrange the cards in 6 equal stacks. How many index cards will be in each stack?

- A** 12
 - B** 9
 - C** 78
 - D** 66
-

38 The list shows three clues about a number.

- The number is greater than 85,629.
- The number is less than 88,231.
- The number has a digit greater than 6 in the hundreds place.

Which of these could be the number described?

- F** 88,165
 - G** 85,625
 - H** 88,930
 - J** 87,720
-

39 Donte counted the square tiles on a rectangular floor at his school. Each tile had an area of 1 square foot. On the floor there were 9 rows of tiles and 36 tiles in each row. What is the area of the floor in square feet?

- A** 360 square feet
- B** 45 square feet
- C** 324 square feet
- D** 90 square feet

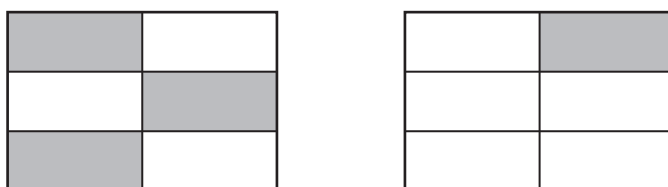
- 40 The table shows the numbers of flowers of different colors in four vases.

Flowers in Vases

Vase	Yellow	Red
Q	9	3
R	15	5
S	21	7
T	27	9

Based on the relationship shown in the table, which statement is true?

- F** There are 3 times as many yellow flowers as red flowers in each vase.
G There are 9 times as many yellow flowers as red flowers in each vase.
H There are 6 times as many yellow flowers as red flowers in each vase.
J There are 11 times as many yellow flowers as red flowers in each vase.
-
- 41 Lily is painting two identical walls. The models are shaded to represent the fraction of each wall that is painted purple.



Which comparison of these fractions is true?

- A** $\frac{3}{6} = \frac{5}{6}$
B $\frac{3}{6} > \frac{1}{6}$
C $\frac{3}{6} > \frac{5}{6}$
D $\frac{3}{6} < \frac{1}{6}$

42 What number goes in the to make a true statement?

$$\square \times 5 = 45$$

F 50

G 8

H 9

J 40

43 A city pays each police officer for the work the police officer does. Which factor would most likely **not** affect the amount of money this city pays a police officer?

A The size of the police officer's family

B The number of years the police officer has worked for the city

C The special skills that the police officer has

D The level of education that the police officer has

44 Felix drew the figures shown below.

Figure 1

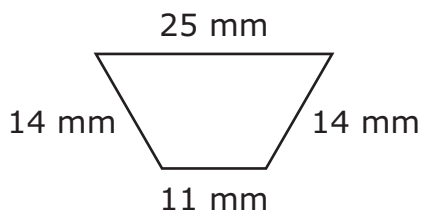


Figure 2

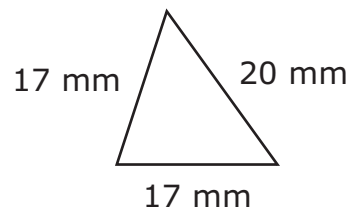


Figure 3

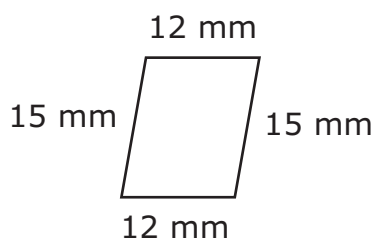
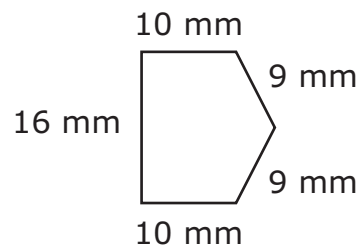


Figure 4



Which list shows all the figures that have a perimeter of 54 millimeters?

- F Figures 2, 3, and 4
- G Figures 2 and 4
- H Figures 1 and 3
- J Figures 1, 2, and 4

45 What is the relationship between the thousands place and the hundreds place in the number shown?

971,111

- A The thousands place is two times greater than the hundreds place.
- B The thousands place is ten times greater than the hundreds place.
- C The thousands place is seven times greater than the hundreds place.
- D The thousands place is zero times greater than the hundreds place.

46 Mr. Thompson sold 247 meals on Tuesday at his restaurant. He sold 516 meals on Wednesday. What is the difference between the numbers of meals Mr. Thompson sold on these two days?

F 763

G 331

H 379

J 269



**STAAR
GRADE 3
Mathematics
May 2016**

