VIRGINIA STANDARDS OF LEARNING

GRADE 4
MATHEMATICS

2023 Mathematics Standards of Learning

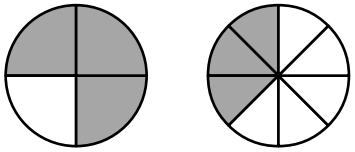
Practice Item Set

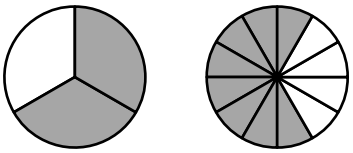
Printed in the United States of America.

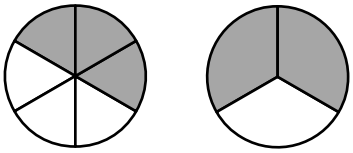
Questions 1–5 are in the non-calculator section. Questions in this section may not be answered with a calculator.

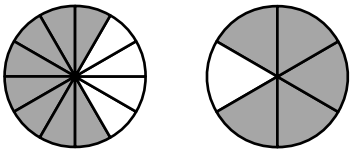
Questions 6–18 are in the calculator section. A calculator may be used with questions in this section.

1 **Each circle shown is the same size. Which correctly compares the fractions represented by the shaded regions of each circle?**

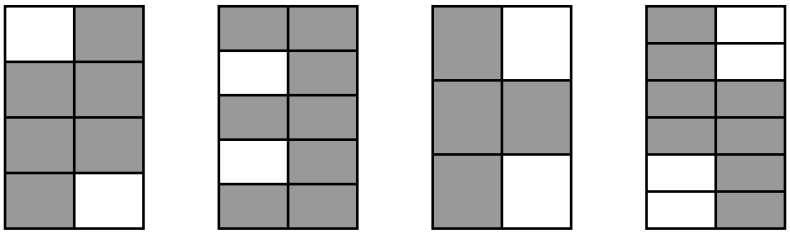
A  $\frac{3}{4} = \frac{3}{8}$

B  $\frac{2}{3} = \frac{8}{12}$

C  $\frac{3}{6} > \frac{2}{3}$

D  $\frac{8}{12} > \frac{5}{6}$

2 **Each model shown is shaded to represent a fraction. Each model is the same size.**



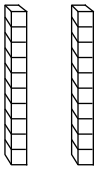
Model 1 **Model 2** **Model 3** **Model 4**

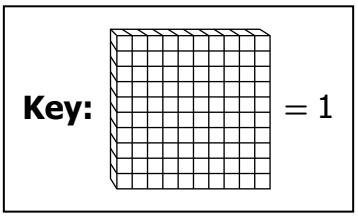
Which two models appear to have equivalent fractions shaded?

F Model 1 and Model 3
G Model 2 and Model 4
H Model 1 and Model 2
J Model 3 and Model 4

3 Model X represents a number.

Model X





Which fraction and decimal are equivalent to the number represented by Model X ?

A $\frac{8}{8}$ and 0.25

B $\frac{2}{10}$ and 2.10

C $\frac{1}{5}$ and 1.5

D $\frac{1}{5}$ and 0.2

4 Which estimate best describes the value of

$$\mathbf{29\frac{1}{3} - 13\frac{2}{3}?}$$

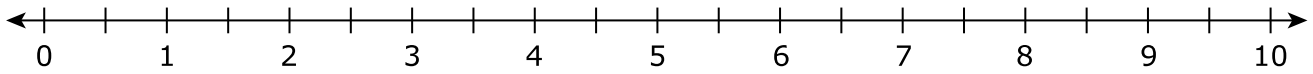
F A little less than 10

G A little less than 16

H A little more than 16

J A little more than 20

5 **James needs $\frac{1}{2}$ foot of string for each bracelet he makes. He will make 5 bracelets.**



What is the total length of string James needs to make 5 bracelets?

A $\frac{2}{5}$ foot

B $2\frac{1}{2}$ feet

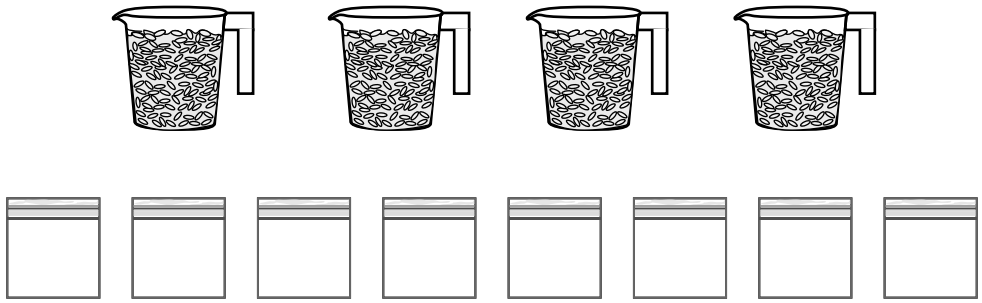
C $5\frac{1}{2}$ feet

D 10 feet

The non-calculator section of the practice item set ends here.

A calculator may be used with questions in the next section.

6 A cook will pour 4 cups of uncooked rice into 8 bags. The cook will pour the same amount of rice into each bag.



Which division statement best represents this situation?

F $4 \div 8 = \frac{4}{8}$ cup of rice in each bag

G $4 \div 8 = \frac{8}{4}$ cups of rice in each bag

H $8 \div 4 = \frac{4}{8}$ cup of rice in each bag

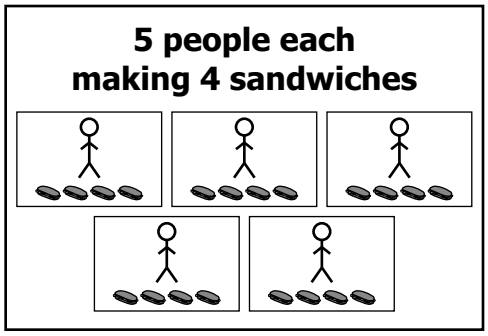
J $8 \div 4 = \frac{8}{4}$ cups of rice in each bag

7 Which group can be represented by the division statement shown?

$$\frac{4}{5} = 4 \div 5$$

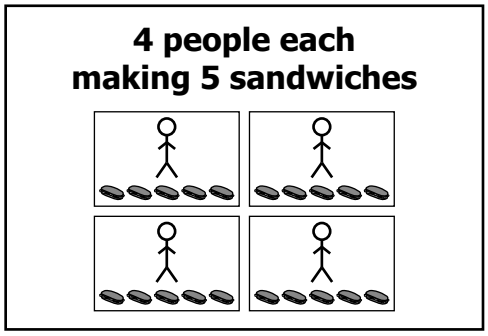
A

Group A



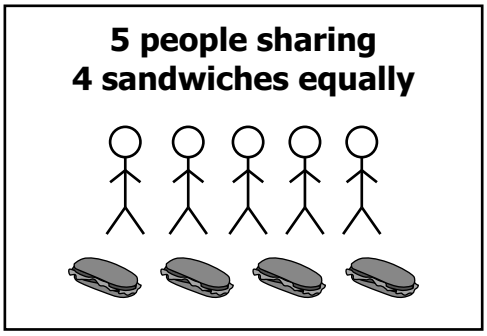
B

Group B



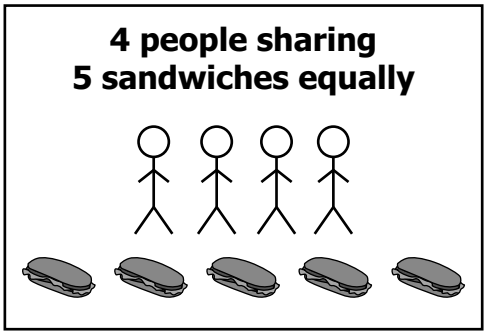
C

Group C

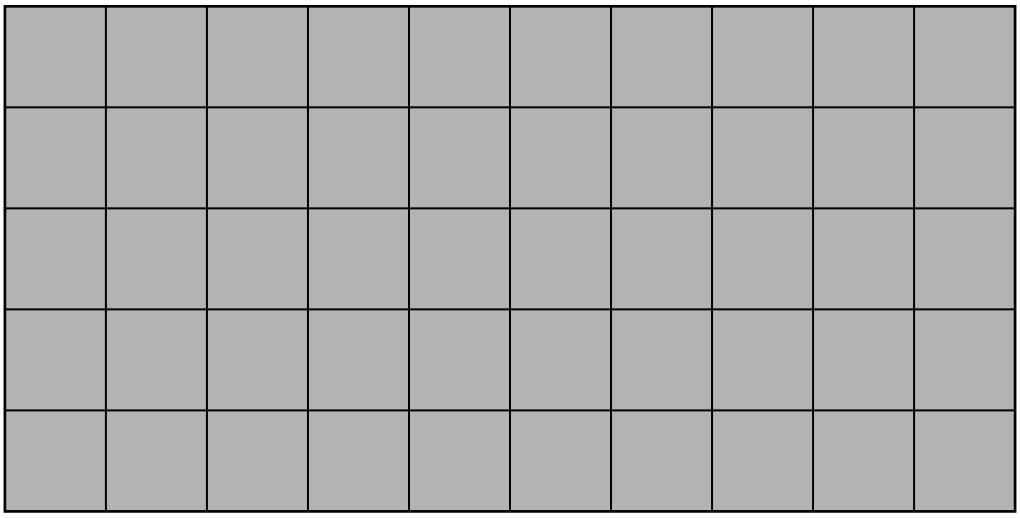


D

Group D



8 The array shown represents a number. It has 5 rows and 10 columns.



Which list shows all the factor pairs for this number?

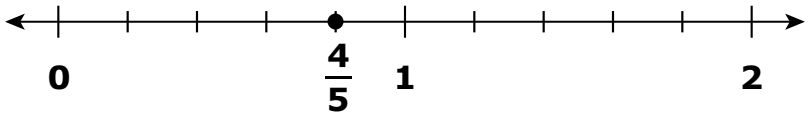
F 5×10
1×50

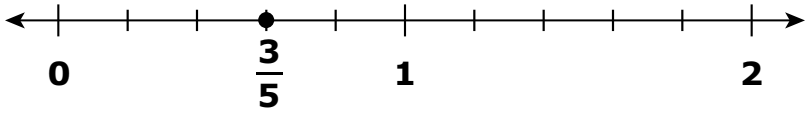
G 10×5
5×10

H 1×50
2×25
5×10

J 5×10
10×5
2×25
25×2

9 **Cindy rode her bike $\frac{4}{5}$ of a mile. Wyatt rode his bike $\frac{3}{5}$ of a mile.**





What is the total distance Cindy and Wyatt rode their bikes?

A $\frac{3}{7}$ mile

B $\frac{7}{10}$ mile

C $\frac{7}{5}$ miles

D $\frac{12}{5}$ miles

10 **Lenny bought sunglasses for $3.35 and a beach towel for $8.71, including tax. He gave the clerk $15.00 to pay for these items. What is the amount of change Lenny should receive?**

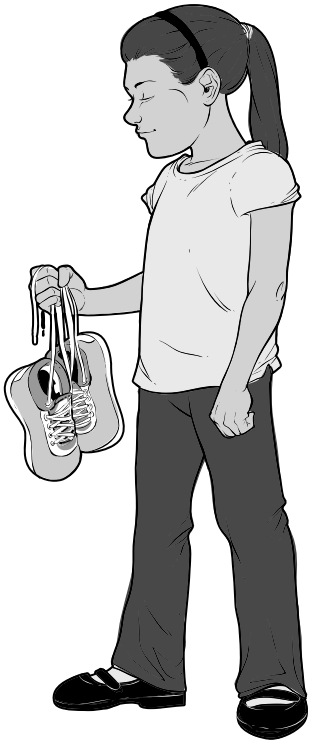
F $2.94

G $3.94

H $11.06

J $12.06

11 Which estimate is most reasonable for the weight or the mass of the gym shoes this girl is holding?



A 40 kilograms
B 30 pounds
C 20 ounces
D 10 grams

12 16 ounces = 1 pound

2 pounds = __?__ ounces

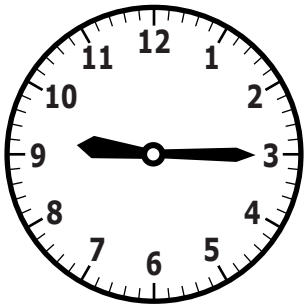
F 32
G 18
H 14
J 8

13 3 feet = 1 yard

Malik bought 38 feet of fencing to place around his garden. Which length is equivalent to 38 feet?

A 12 yards 2 feet
B 12 yards 2 inches
C 3 yards 2 feet
D 3 yards 2 inches

14 This clock shows the time Xavier finished swim practice.

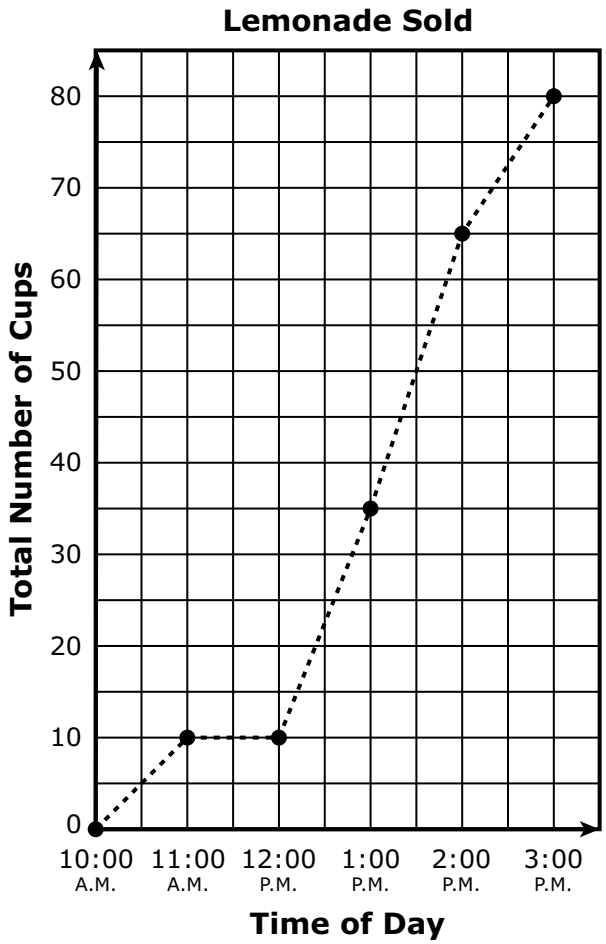


His practice lasted 2 hours 20 minutes. At what time did Xavier's swim practice start?

F 7:55
G 7:15
H 7:35
J 6:55

Directions: Use the following information to answer question 15.

This line graph shows the total number of cups of lemonade Patrick sold on one day from 10:00 A.M. until 3:00 P.M.



15 Which table shows another way to organize the data?

A

Lemonade Sold

Time of Day	Number of Cups Sold Per Hour	Total Number of Cups
10:00 A.M.	0	0
11:00 A.M.	10	10
12:00 P.M.	0	10
1:00 P.M.	25	35
2:00 P.M.	30	65
3:00 P.M.	15	80

B

Lemonade Sold

Time of Day	Number of Cups Sold Per Hour	Total Number of Cups
10:00 A.M.	0	0
11:00 A.M.	10	10
12:00 P.M.	10	0
1:00 P.M.	35	25
2:00 P.M.	65	30
3:00 P.M.	80	15

C

Lemonade Sold

Time of Day	Number of Cups Sold Per Hour	Total Number of Cups
10:00 A.M.	10	10
11:00 A.M.	10	10
12:00 P.M.	0	10
1:00 P.M.	25	35
2:00 P.M.	30	65
3:00 P.M.	15	80

D

Lemonade Sold

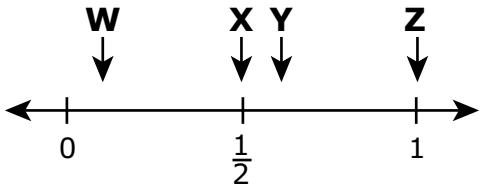
Time of Day	Number of Cups Sold Per Hour	Total Number of Cups
10:00 A.M.	10	10
11:00 A.M.	10	10
12:00 P.M.	0	10
1:00 P.M.	25	35
2:00 P.M.	30	65
3:00 P.M.	80	80

End of Set

16 Isaiah has erasers in his pocket.

- **There are orange erasers and purple erasers.**
- **All the erasers are the same size and shape.**
- **Isaiah is least likely to select a purple eraser when he takes one eraser out of his pocket without looking.**

Which letter best represents the probability Isaiah will select a purple eraser?

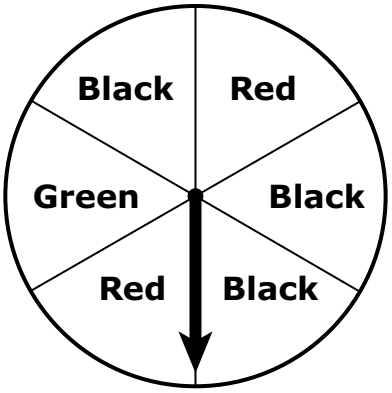


Select the correct answer.

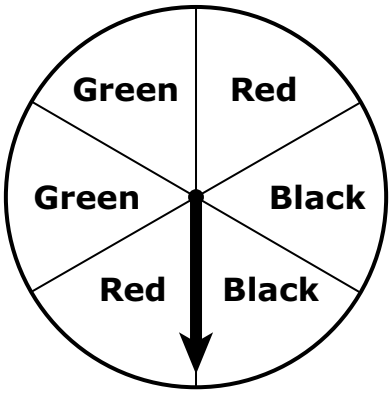
F W
G X
H Y
J Z

17 The probability that the arrow on a spinner will land on a space labeled black is $\frac{3}{6}$. Which spinner best represents this situation?

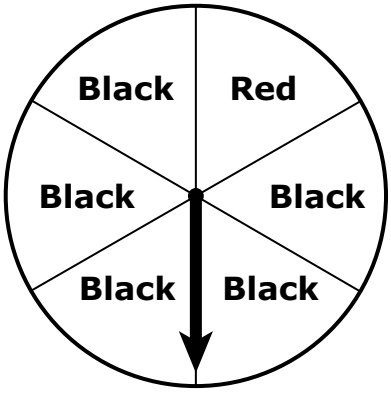
A



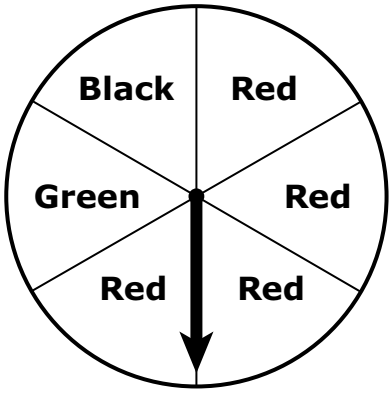
C



B



D



18 This list of numbers follows a pattern.

14, 23, 32, 41, 50…

The pattern continues in the same way. What will be the 7th number in this pattern?

F 72

G 68

H 59

J 51

Grade 4 Mathematics
Practice Item Set Spring 2025
Answer Key

Sequence Number	Correct Answer	Reporting Category	Reporting Category Description
1	B	001	Number and Number Sense
2	J	001	Number and Number Sense
3	D	001	Number and Number Sense
4	G	002	Computation and Estimation
5	B	002	Computation and Estimation
6	F	001	Number and Number Sense
7	C	001	Number and Number Sense
8	H	002	Computation and Estimation
9	C	002	Computation and Estimation
10	F	002	Computation and Estimation
11	C	003	Measurement and Geometry
12	F	003	Measurement and Geometry
13	A	003	Measurement and Geometry
14	J	003	Measurement and Geometry
15	A	004	Probability, Statistics, Patterns, Functions, and Algebra
16	F	004	Probability, Statistics, Patterns, Functions, and Algebra
17	A	004	Probability, Statistics, Patterns, Functions, and Algebra
18	G	004	Probability, Statistics, Patterns, Functions, and Algebra

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