



**THIRD SPACE
LEARNING**

4th Grade CCSS State Test

Common Core Grade 4

Grade 4

Questions

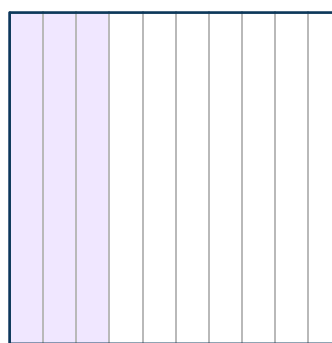
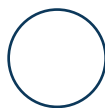
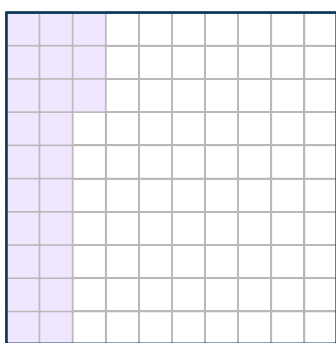
Name:

Class:

Date:

Score:

- 1 Which of the following statements correctly compares the two decimals below?



A. $0.23 > 0.3$

C. $0.3 > 0.23$

B. $0.03 < 0.23$

D. $23 < 3$

- 2 Nathan is planting a garden with his grandmother. They planted 4 times as many cucumber plants as squash plants. If there are 24 cucumber plants, how many squash plants are there?

A. 96 squash plants

C. 20 squash plants

B. 6 squash plants

D. 28 squash plants

- 3 Using the following rectangular array, Colin solves 37×19 .

300	70
?	63

What missing number will complete Colin's array?

- A. 9
 - B. 30
 - C. 133
 - D. 270
-

- 4 Which set of numbers are all multiples of 12?

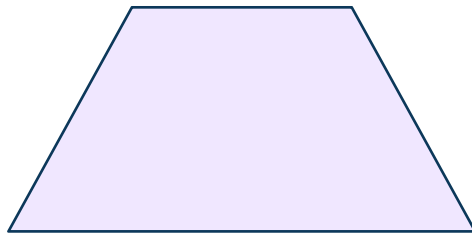
- A. 24, 36, 46, 60
- B. 1, 12, 24, 36
- C. 1, 2, 3, 4, 6, 12
- D. 12, 24, 36, 48

- 5 Nigel volunteers at an animal shelter. They have 48 pounds of dog food. Nigel feeds the dogs in servings of ounces. How many ounces of dog food does the animal shelter have?

(1 pound = 16 ounces)

- A. 48 ounces
 - B. 3 ounces
 - C. 768 ounces
 - D. 722 ounces
-

- 6 How many lines of symmetry does the figure below have?



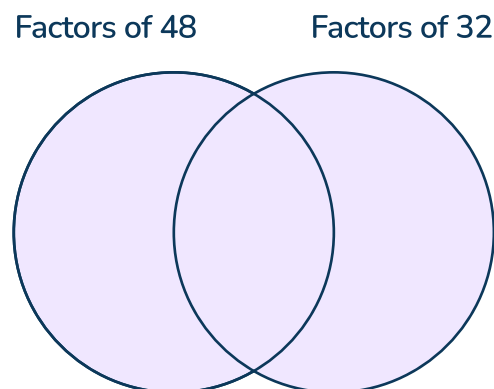
- A. 1
- B. 4
- C. 0
- D. 2

- 7 A class is comparing the digits' values in the numbers 145,802 and 18,425.

Which statements are true? Select all that apply.

- A. The digit 2 in 45,802 is ten times larger than in 8,425.
 - B. The digit 8 in 8,425 is ten times larger than in 45,802.
 - C. The digit 5 in 8,425 is one thousand times smaller than in 45,802.
 - D. The digit 4 in 45,802 is one thousand times larger than in 8,425.
 - E. The digit 1 in 145,802 is one hundred times larger than in 18,425.
-

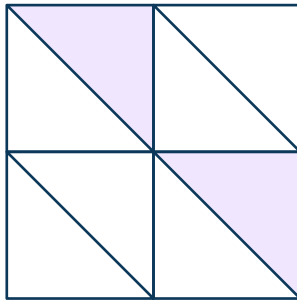
- 8 Examine the Venn Diagram.



What is the greatest number that belongs in the middle of the Venn Diagram?

- A. 16
- B. 2
- C. 8
- D. 4

- 9 Geraldo had a square with 8 equal parts. He shaded 2 of them. Which fractions does Geraldo's square show are equal?

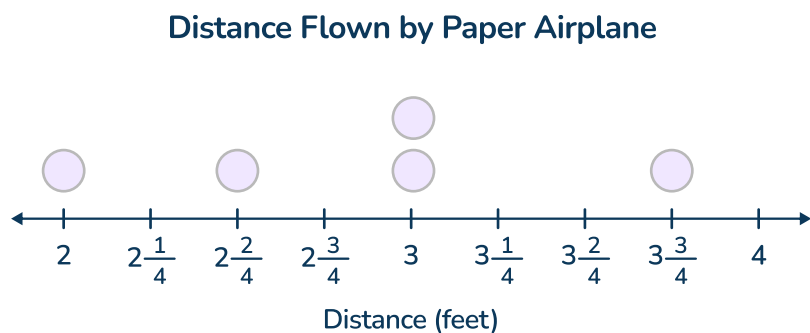


- A. $\frac{1}{8} = \frac{1}{4}$
- B. $\frac{2}{8} = \frac{1}{4}$
- C. $\frac{1}{8} = \frac{1}{2}$
- D. $\frac{2}{8} = \frac{1}{2}$

-
- 10 Precious makes and sells homemade soaps. She is putting them into boxes. She places 6 bars of soap in each box. How many boxes does she need for 415 bars of soap?

- A. 37
- B. 69
- C. 65
- D. 70

- 11 The line plot shows the distances that Alex threw his paper airplane during a science experiment.



What is the difference between the shortest and longest distance Alex threw his paper airplane last week?

- A. $1\frac{3}{4}$ feet
 - B. 1 feet
 - C. $2\frac{1}{4}$ feet
 - D. $2\frac{3}{4}$ feet
-
- 12 Which of the following numbers round to 900 when rounded to the nearest hundred? Select all that apply.

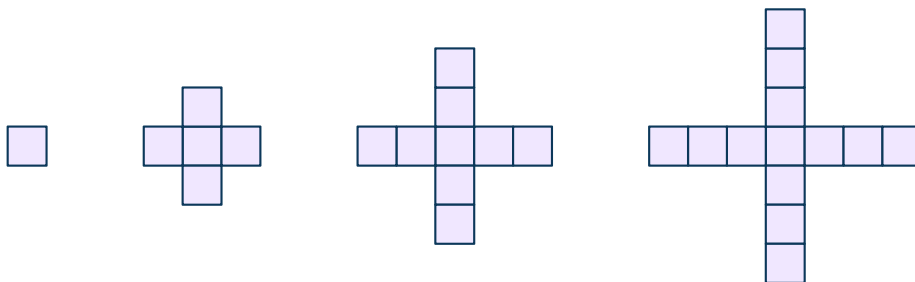
- A. 945
- B. 987
- C. 846
- D. 785
- E. 851

- 13 What is the value of point X on the number line below?



- A. 0.14
- B. 0.77
- C. 0.73
- D. 0.83

- 14 Look at the pattern of figures below. If the pattern continues, how many squares will make up the 6th figure?



- A. 13
- B. 17
- C. 21
- D. 25

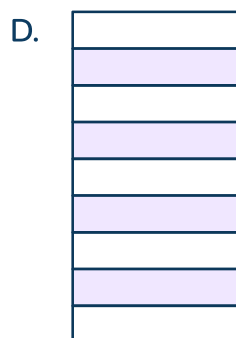
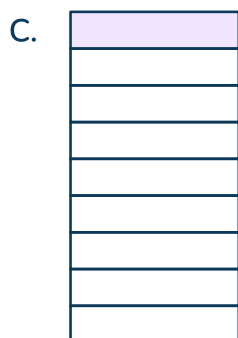
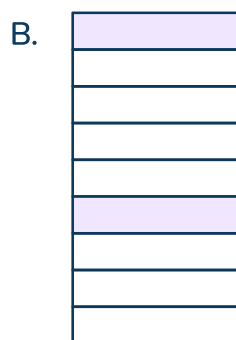
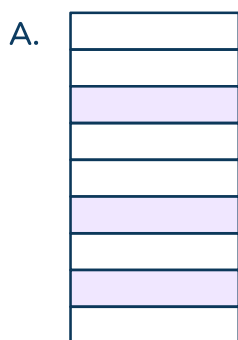
- 15 Ursula subtracted with the standard algorithm.

$$\begin{array}{r} 5,791 \\ - 3,428 \\ \hline 2,377 \end{array}$$

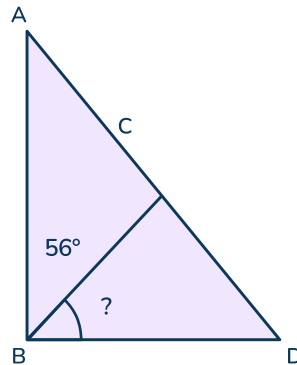
What mistake did Ursula make?

- A. She did not make any mistakes.
- B. She did not line up the place values correctly.
- C. She did not carry the extra hundred to make 8 hundreds on top.
- D. She did not borrow 1 ten to subtract 8 from 11 ones.

- 16 The shapes are divided into equal parts. Which shape is $\frac{1}{3}$ shaded?

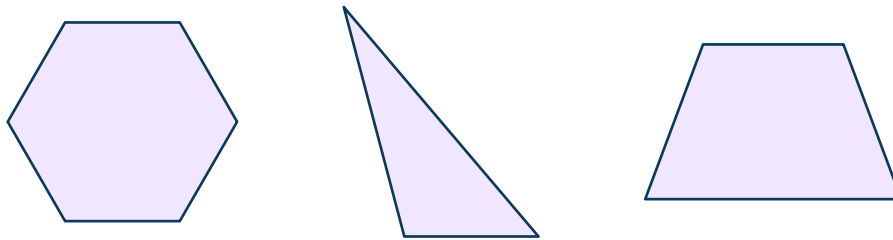


- 17 The right triangle below is divided into two parts. The measure of angle ABC is 56 degrees. What is the measure of angle CBD?



- A. 34°
B. 56°
C. 90°
D. 45°
-
- 18 Starting number: 137
Rule: add 13 each time
Which statement is true about the numbers in the pattern?
- A. All the numbers are even.
B. All the numbers are odd.
C. The numbers alternate between even and odd.
D. The first number is odd and the rest are even.

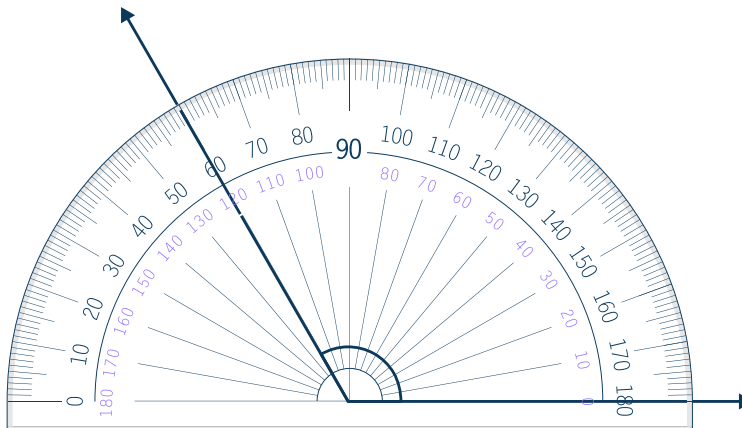
- 19 Theo sorts these figures into the same group.



Which statement best describes the figures in this group?

- A. Each figure has at least one pair of parallel sides.
- B. Each figure has at least one acute angle.
- C. Each figure is a regular polygon.
- D. Each figure has at least one obtuse angle.

-
- 20 What is the measure of the angle?



- A. 145°
- B. 30°
- C. 120°
- D. 60°

21 Which number comparison is true?

- A. Two thousand eight hundred seven = $(2 \times 1,000) + (8 \times 100) + (7 \times 10)$
- B. $(3 \times 1,000) + (8 \times 10) + (4 \times 1) <$ three thousand eight hundred four
- C. $(2 \times 10,000) + (6 \times 1,000) + (6 \times 1) <$ twenty six thousand six
- D. Eighteen thousand one hundred seventy $< (1 \times 1,000) + (1 \times 800) + (1 \times 100) + (7 \times 10)$

22 Solve $52,302 - 18,745$.

- A. 46,443
- B. 34,567
- C. 33,557
- D. 44,567

- 23 Which table shows the relationship between cups and quarts.
(1 quart = 4 cups)

A.

cups	quarts
1	4
2	8
8	12

B.

cups	quarts
4	1
8	2
12	3

C.

cups	quarts
1	5
2	6
3	7

D.

cups	quarts
5	1
6	2
7	3

-
- 24 Fatima and Stephanie each ran at a track meet. Fatima ran $\frac{3}{4}$ miles.
Stephanie ran 5 times as far as Fatima. How many miles did Stephanie run?

- A. $3\frac{3}{4}$
B. $2\frac{1}{4}$
C. $1\frac{1}{2}$
D. $4\frac{1}{4}$

25 What is the value of $3,187 \times 7$?

- A. 2,149
- B. 22,309
- C. 22,269
- D. 2,239

26 Which process shows a correct way to add the fractions below?

$$\frac{6}{100} + \frac{4}{10}$$

- A. $\frac{6}{100} + \frac{4}{10} = \frac{6+4}{100+10} = \frac{10}{110}$
- B. $\frac{6}{100} + \frac{4}{10} = \frac{6+4}{100} = \frac{10}{100}$
- C. $\frac{6}{100} + \frac{40}{10} = \frac{6+40}{100+10} = \frac{46}{110}$
- D. $\frac{6}{100} + \frac{40}{100} = \frac{6+40}{1000} = \frac{46}{100}$

27 What are the next 3 numbers in the pattern?

4, 9, 19, 34, 54, _____, _____, _____

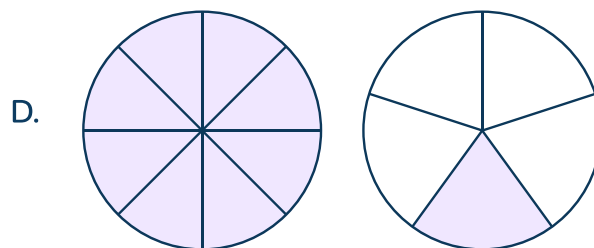
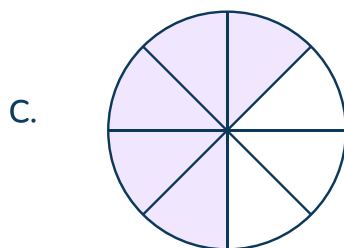
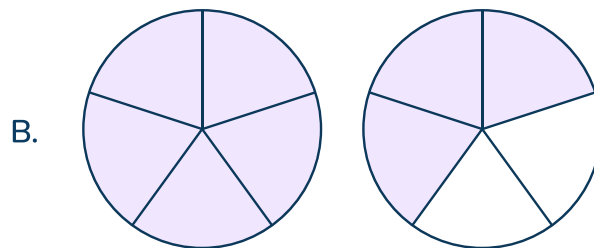
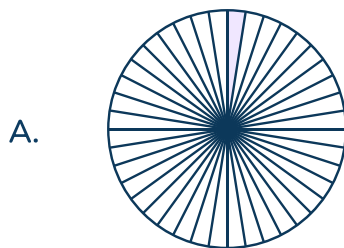
A. 79, 109, 144

B. 66, 86, 106

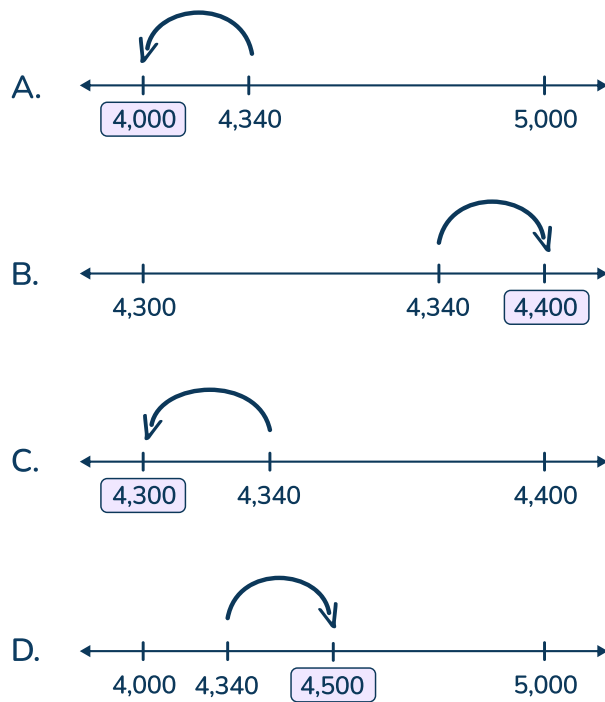
C. 51, 56, 61

D. 71, 96, 121

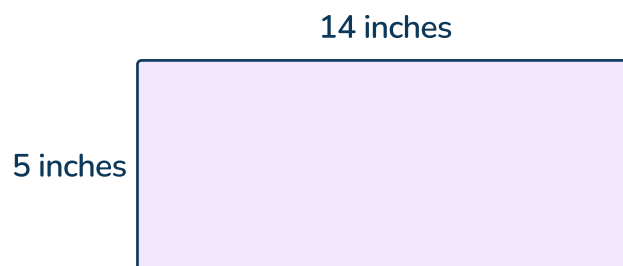
28 Choose the model that shows $8 \times \frac{1}{5}$.



29 Which shows 4,340 rounded to the nearest hundred on a number line?

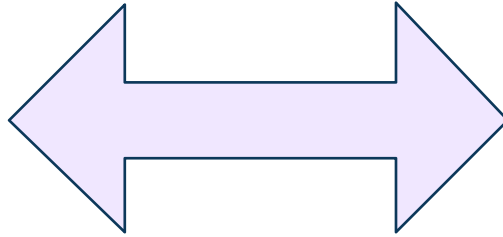


30 What is the area of the rectangle?



- A. 19 inches
- B. 38 inches
- C. 70 square inches
- D. 80 square inches

- 31 How many line segments make up the polygon?



- A. 10
- B. 3
- C. 9
- D. 6

-
- 32 Eli read for 35 minutes. Then he played his video game for 1 hour, before he spent time eating lunch. If he started reading at 9:50 am and finished eating lunch at 12:05 pm, how long did he spend eating lunch?

- A. 40 minutes
- B. 25 minutes
- C. 35 minutes
- D. 20 minutes

33 Which statements match an equation equal to 24? Select all that apply.

- A. 3 times as many as 7
- B. 4 times as many as 6
- C. 12 times as many as 2
- D. 6 times as many as 18

34 Trevor's garden is 16 feet by 18 feet. If each plant needs 9 square feet of space, how many plants can Trevor have in his garden?

- A. 288 plants
- B. 34 plants
- C. 2,592 plants
- D. 32 plants

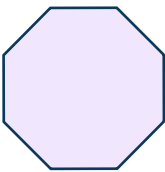
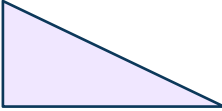
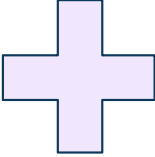

35 Round 45,359 to the nearest hundred.

- A. 45,000
- B. 45,400
- C. 45,360
- D. 45,300

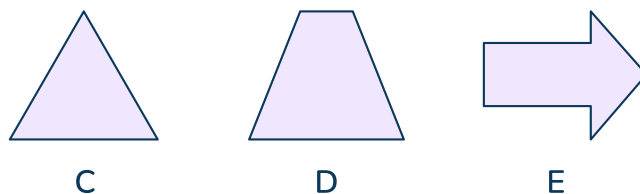
36 Nathan has 6 cups of water. He uses $1\frac{7}{8}$ cups to water his snake plant. He uses $2\frac{5}{8}$ cups to water his spider plant. How much water is left?

- A. $4\frac{4}{8}$ cups
- B. $4\frac{3}{8}$ cups
- C. $1\frac{3}{8}$ cups
- D. $1\frac{4}{8}$ cups

37 Which shape does NOT have a right angle?

- A. 
- B. 
- C. 
- D. 

38 Which figures have both parallel and perpendicular sides?



- A. Figure C
- B. Figure D & E
- C. Figure E
- D. None of the figures

39 Solve $98,341 + 423,548$.

- A. 411,888
- B. 521,889
- C. 511,888
- D. 521,899

40 Jayson had 1 whole watermelon. He ate $\frac{1}{8}$ of the watermelon on Monday, $\frac{3}{8}$ of the watermelon on Tuesday, and $\frac{2}{8}$ of the watermelon on Wednesday. What fraction of the watermelon was left after Wednesday?

- A. $\frac{1}{8}$
- B. $\frac{2}{8}$
- C. $\frac{5}{8}$
- D. $\frac{6}{8}$

Standard: 4.NBT.6

DOK 3

Short Answer Response - 5 points

Noa used the following strategy to solve $3,304 \div 8$.

$$8 \times 100 = 800$$

$$\begin{array}{r} 3,304 \\ - 800 \\ \hline 2,504 \\ - 800 \\ \hline 1,704 \\ - 800 \\ \hline 904 \\ - 800 \\ \hline 104 \end{array}$$

$$8 \times 12 = 96$$

$$8 \times 1 = 8$$

$$40 + 12 + 1 =$$

- Explain Noa's strategy, including identifying any mistakes.
- Finish solving with Noa's strategy and show the final quotient.

Item	KEY	Rationale
41	5 points	Student correctly explains the mistake Noa made and how she can fix it (40 should be 400 because subtracting by 800 was in groups of 100, not 10) Student correctly divides by adding the partial quotients of $400 + 12 + 1 = 413$.
	2.5 points	Student correctly solves using Noa's strategy OR correctly explains the mistake.
	0 points	Student does not correctly explain the mistake AND does not correctly solve the equation using Noa's strategy.

Standard: 4.OA.2, 4.OA.3

DOK 2

Short Answer Response - 5 points

Over winter break, Alvin read 52 pages of a book. Oscar read 6 times as many pages of the same book. Oscar read 3 times as many pages as Nicole.

Write an expression to represent the number of pages Oscar read and an expression to represent the number of pages Nicole read. Then, solve each expression."

Oscar	Nicole

Item	KEY	Rationale
42	5 points	To receive 5 points, students need to write a correct expression for both Oscar and Nicole, and they need to find the correct value of each one. Oscar: $52 \times 6 = 312$ pages Nicole: $312 \div 3 = 104$ pages
	2.5 points	Students will receive 2.5 points if they only write one correct expression or if they only evaluate one expression correctly.
	0 points	Students will receive 0 points if they leave the response blank, or if they do not write a correct expression or solve correctly.

Standard: 4.NF.2

DOK 3

Short Answer Response - 5 points

A class is comparing the fractions $\frac{2}{3}$ and $\frac{8}{9}$. Below are 3 students' responses.

2 and 3 are smaller than 8 and 9, so $\frac{2}{3}$ is a smaller fraction.



Wayne

Both fractions are 1 part away from 1 whole, and thirds are larger parts, so $\frac{2}{3}$ is smaller.



Jillian

$\frac{2}{3}$ is equivalent to $\frac{8}{12}$, and since 8 twelfths are larger than 8 ninths, $\frac{2}{3}$ is the larger fraction.



Tom

Critique each student's response - explaining which parts are correct and identify and fixing any mistakes.

Item	KEY	Rationale
43	5 points	<p>Student identifies and explains all the correct and incorrect parts...</p> <ul style="list-style-type: none">• Wayne compared the numerator and denominator separately, which is incorrect. Even though he had the right answer, his reasoning was wrong.• Jillian saw that both numerators were 1 away from a whole, so each fraction is only missing one part. Since thirds are larger, they will be farther away from 1 than eighths. Her answer and reasoning is correct.• Tom creates equivalent fractions to compare numerators. However, he is wrong when he says twelfths are larger, they are smaller, making $\frac{8}{9}$ the bigger fraction.
	2.5 points	Student explains most correct and incorrect parts (missing no more than 1 part) OR student makes 1 mistake.
	0 points	Students do not identify most correct or incorrect parts OR make multiple mistakes.

Answer Key - Multiple Choice

Item number	Correct answer	Standard(s)	DOK
1	C	4.NF.7	DOK 1
2	B	4.OA.1, 4.OA.2	DOK 2
3	D	4.NBT.5	DOK 2
4	D	4.OA.4	DOK 1
5	C	4.MD.2, 4.NBT.5	DOK 2
6	A	4.G.3	DOK 1
7	B, C	4.NBT.1	DOK 1
8	A	4.OA.4	DOK 2
9	B	4.NF.2	DOK 1
10	D	4.NBT.6, 4.OA.3*	DOK 2
11	A	4.MD.4	DOK 2
12	A, E	4.NBT.3	DOK 1
13	B	4.NF.6	DOK 2
14	C	4.OA.5	DOK 2
15	D	4.NBT.4	DOK 3
16	A	4.NF.1	DOK 2
17	A	4.MD.7	DOK 1
18	C	4.OA.5	DOK 2
19	D	4.G.2	DOK 2

Common Core State Test | Grade 4 | Answers

Item number	Correct answer	Standard(s)	DOK
20	C	4.MD.6	DOK 1
21	B	4.NBT.1, 4.NBT.2*	DOK 2
22	C	4.NBT.4	DOK 1
23	B	4.MD.1	DOK 1
24	A	4.NF.4a, 4.NF.4b 4.NF.4c*	DOK 2
25	B	4.NBT.5	DOK 1
26	D	4.NF.5	DOK 2
27	A	4.OA.5	DOK 2
28	B	4.NF.4	DOK 1
29	C	4.NBT.3	DOK 2
30	C	4.MD.3 , 4.NBT.5	DOK 1
31	A	4.G.1	DOK 1
32	A	4.MD.2	DOK 2
33	B, C	4.OA.1	DOK 1
34	D	4.MD.2	DOK 2
35	B	4.NBT.3	DOK 1
36	D	4.NF.3	DOK 2
37	A	4.G.2	DOK 1
38	C	4.G.2	DOK 2
39	B	4.NBT.4	DOK 1
40	B	4.NF.3a, 4.NF.3b, 4.NF.3c, 4.NF.3d*	DOK 2

ANSWERS SORTED BY CCSS STRAND

OA			
2	B	4.OA.1, 4.OA.2	DOK 2
4	D	4.OA.4	DOK 1
8	A	4.OA.4	DOK 2
10	D	4.NBT.6, 4.OA.3*	DOK 2
14	C	4.OA.5	DOK 2
18	C	4.OA.5	DOK 2
27	A	4.OA.5	DOK 2
33	B, C	4.OA.1	DOK 1
42	Short answer response	4.OA.2, 4.OA.3	DOK 2

NBT			
3	D	4.NBT.5	DOK 2
7	B, C	4.NBT.1	DOK 1
12	A, E	4.NBT.3	DOK 1
15	D	4.NBT.4	DOK 3
21	B	4.NBT.1, 4.NBT.2	DOK 2
22	C	4.NBT.4	DOK 1
25	B	4.NBT.5	DOK 1
29	C	4.NBT.3	DOK 2
35	B	4.NBT.3	DOK 1
39	B	4.NBT.4	DOK 1
41	Short answer response	4.NBT.6	DOK 3

Common Core State Test | Grade 4 | Answers

NF			
1	C	4.NF.7	DOK 2
9	B	4.NF.2	DOK 1
13	B	4.NF.6	DOK 2
16	A	4.NF.1	DOK 2
24	A	4.NF.4a, 4.NF.4b 4.NF.4c*	DOK 2
26	D	4.NF.5	DOK 2
28	B	4.NF.4	DOK 2
36	D	4.NF.4	DOK 1
40	B	4.NF.3a, 4.NF.3b, 4.NF.3c, 4.NF.3d*	DOK 2
43	Short answer response	4.NF.2	DOK 2

MD			
5	C	4.MD.2, 4.NBT.5	DOK 2
11	A	4.MD.4	DOK 2
17	A	4.MD.7	DOK 1
20	C	4.MD.6	DOK 1
23	B	4.MD.1	DOK 1
30	C	4.MD.3, 4.NBT.5	DOK 1
32	A	4.MD.2	DOK 2
34	D	4.MD.2, 4.MD.3, 4.NBT.5, 4.NBT.6	DOK 2

G			
6	A	4.G.3	DOK 1
19	D	4.G.1	DOK 2
31	A	4.G.1	DOK 1
37	A	4.G.2	DOK 1
38	C	4.G.2	DOK 2

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“We just had our first session and it went great! The kids really liked it and felt like they were learning! One even said he finally felt like math was making sense.”



Michelle Craig, Instructional Coach,
Sherwood Forest Elementary, Washington

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