THIRD SPACE LEARNING

3rd Grade Michigan State Test

State Test Grade 3

Grade 3

Questions

Name: ..... Class: .....

Date: ..... Score: .....

1 Leilani has 9 spiders. Each spider has 8 legs. Each leg has a tip with 3 tiny hairs. Which equation shows the total number of legs?

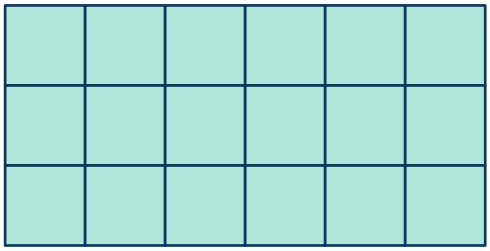
A. $9 \times 8 \times 3$
B. 8×3
C. 9×8
D. 9×3

2 A classroom has 15 books on a shelf. A new shipment with 4 boxes, each containing 6 books, just arrived. How many books does the classroom have now?

Which equation can be used to solve?

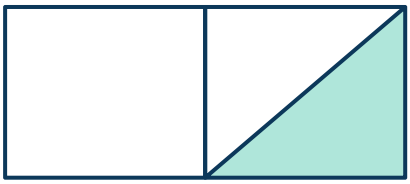
A. $15 + 4 + 6 = b$
B. $6 + 4 \times 15 = b$
C. $(15 + 4) \times 6 = b$
D. $4 \times 6 + 15 = b$

3 What is the area of the rectangle?



A. 18 units
B. 18 square units
C. 15 units
D. 15 square units

4



Complete the sentence: The area of the shaded triangle is ____ of the area of the whole shape.

A. $\frac{1}{2}$

B. $\frac{1}{3}$

C. $\frac{1}{4}$

D. $\frac{1}{8}$

5 $4 \times 80 = g$

What is the value of g?

A. 480
B. 320
C. 120
D. 32

---

6 What number makes the equations true?

7 x _____ = 42

42 ÷ 7 = _____

A. 6
B. 8
C. 9
D. 7

7 Which fraction is larger than $\frac{3}{4}$?

A. $\frac{4}{6}$

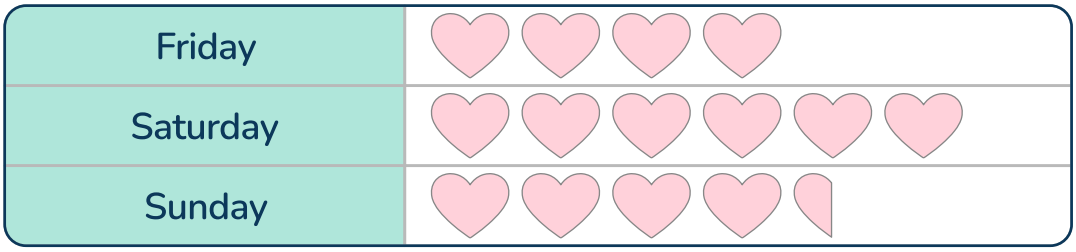
B. $\frac{1}{2}$

C. $\frac{5}{6}$

D. $\frac{4}{8}$

8

Pies Sold



= 4 pies

How many more pies were sold on Saturday than on Sunday?

A. 4

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

C. 6

D. 8

9

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	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Zane circles the products of 8 in red and shades the products of 4 in blue.
Which statements about the products are true? Select all the correct answers.

A. All products of 8 are also products of 4
B. All products of 4 are also products of 8
C. The products of 4 are always odd
D. The products of 8 are always even
E. Half a product of 8 is always a product of 4

10

Which fraction is equivalent to the value of the point shown?

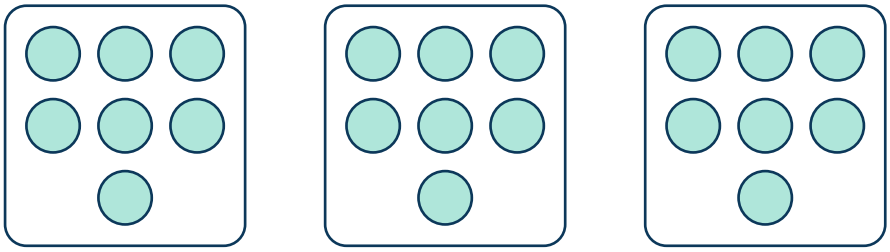
A. $\frac{5}{6}$

B. $\frac{5}{8}$

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

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

11



Which problems can be represented by the model above? Select all the correct answers.

A. Lana scored 7 points and then 7 more points. How many points did she score in total?
B. There are 3 pages. Each page has 21 stickers on it. How many stickers are there in all?
C. There are 7 books. Each book has 21 pages. How many pages does one book have?
D. There are 3 bins of teddy bears. Each bin has 7 teddy bears. How many teddy bears are there in total?
E. There are 21 liters of water. Each bucket needs 7 liters of water. How many buckets can be filled?

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12 Carlos has 4 cats. Each cat drinks 2 cups of water each day. Carlos has 48 cups of water. How many days can Carlos provide water for his cats with the amount he has?

A. 8 days
B. 12 days
C. 6 days
D. 24 days

13 What is 6,493 rounded to the nearest hundred?

A. 6,400
B. 6,500
C. 6,000
D. 6,490

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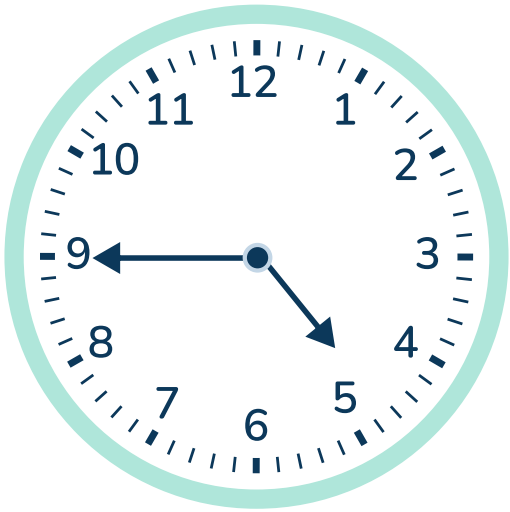
14 What time is shown on the clock?



A. 9:25
B. 5:45
C. 4:45
D. 9:24

15 Which number line correctly shows the fraction $\frac{5}{8}$?

A.

B.

C.

D.

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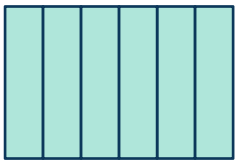
16 Which is the best estimate for the weight of a loaf of bread?

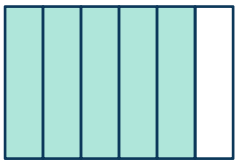
A. 500 grams
B. 5 kilograms
C. 5 grams
D. 500 kilograms

17 Which shape correctly completes the comparison?

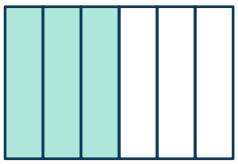
A.



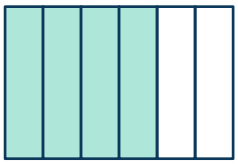
B.



C.



D.



18 Complete the sentence: A rectangle and a parallelogram both always have...

A. ...equal sides.
B. ...congruent
C. ...parallel sides.
D. ...right angles.

19 Jake has 24 feet of ribbon. What are the possible dimensions for a rectangular frame that Jake can completely wrap the ribbon around? Select all the correct answers.

A. 7 feet by 5 feet
B. 4 feet by 8 feet
C. 12 feet by 2 feet
D. 6 feet by 6 feet
E. 6 feet by 4 feet

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20 Which equation can help you solve 54 ÷ 9 = △?

A. 9 x △ = 54
B. 9 ÷ △ = 54
C. △ ÷ 9 = 54
D. △ x 54 = 9

21 Solve 732 – 568.

A. 236
B. 174
C. 164
D. 136

22

What is the missing value?

A. 0
B. $\frac{1}{2}$
C. $\frac{8}{4}$
D. $\frac{2}{8}$

23 A bakery has 72 cupcakes. They will be arranged into 8 equal boxes. Each box will contain the same number of cupcakes. Which equation can be used to find the number of cupcakes in each box?

A. 72 x 8 = ?
B. 72 ÷ 8 = ?
D. 72 – 8 = ?
E. 72 + 8 = ?

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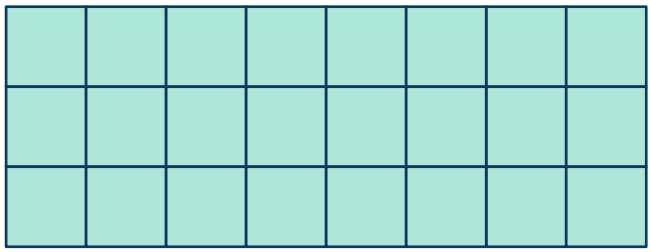
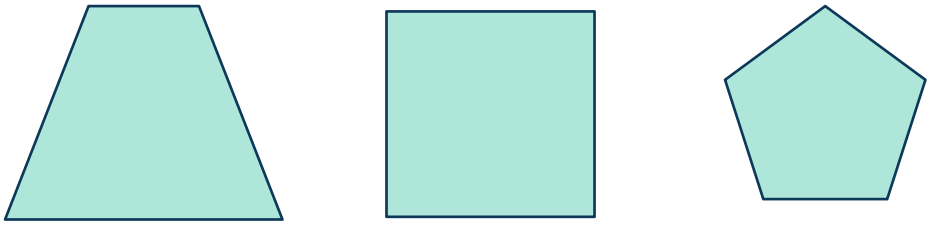
24 The shape below is made of square units.

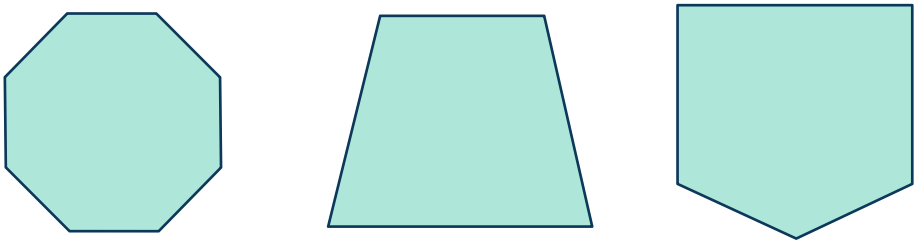


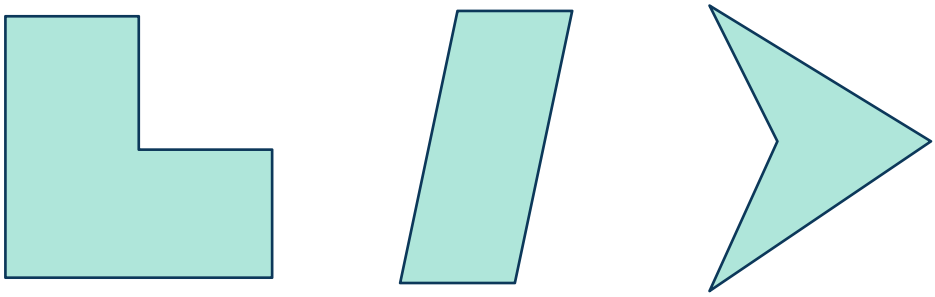
Which expressions can be used to find the area of the shape? Select all the correct answers.

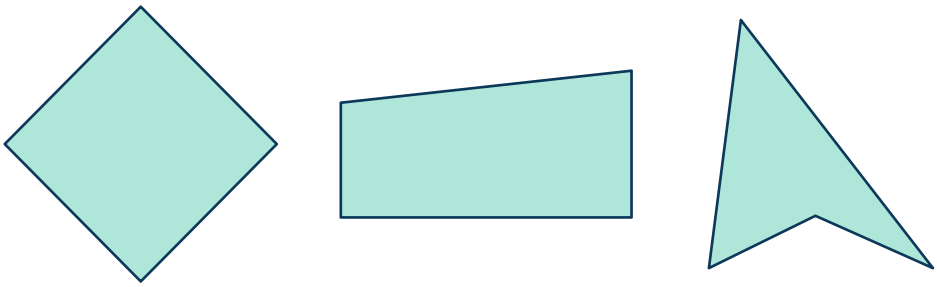
A. 8 + 3
B. 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3
C. 8 + 3 + 8 + 3
D. 8 x 3
E. 8 + 8 + 8

25 Which group of shapes only has quadrilaterals?

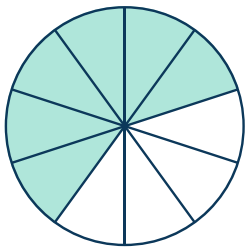
A. 

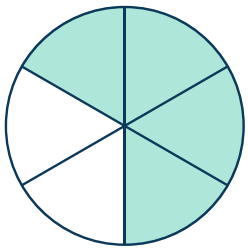
B. 

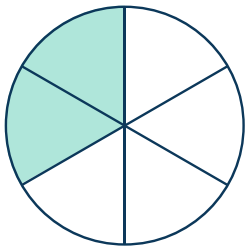
C. 

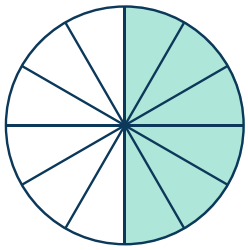
D. 

26 Which shape shows a shaded amount equivalent to $\frac{3}{5}$?

A. 

B. 

C. 

D. 

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27 Spencer is solving ? ÷ 8 = 7. Which equation can help Spencer solve his equation?

A. 8 ÷ ? = 7
B. 8 x 7 = ?
C. ? x 7 = 8
D. 7 ÷ 8 = ?

28 Sarah baked 12 cookies on Sunday. For the next 5 days, she will bake 8 cookies each day. At the end of the week, how many cookies will Sarah have baked?

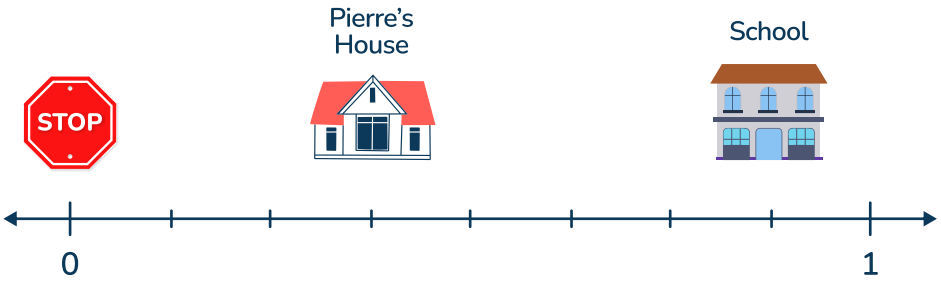
A. 68 cookies
B. 25 cookies
C. 52 cookies
D. 40 cookies

---

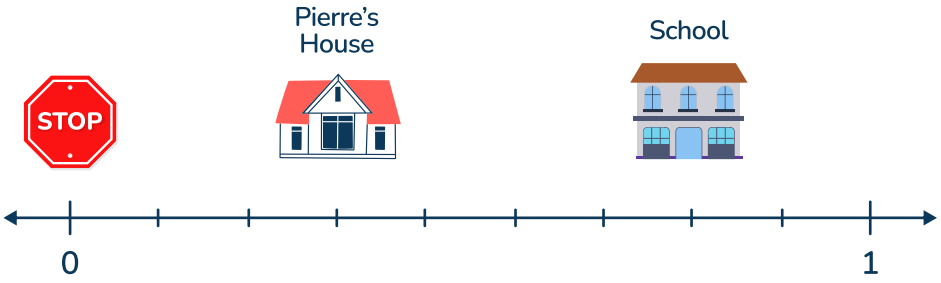
29 Pierre lives on a 1-mile street. Pierre lives $\frac{3}{10}$ of a mile from the stop sign. There is a school $\frac{7}{10}$ of a mile from the stop sign. Which number line correctly shows Pierre's house and the school?

A.

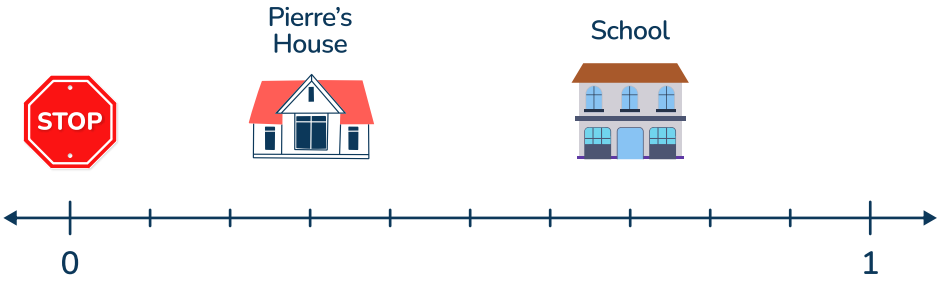
B.



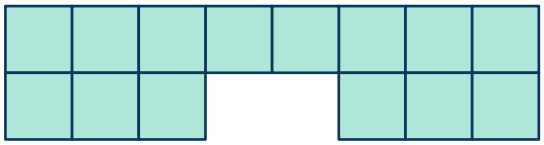
C.

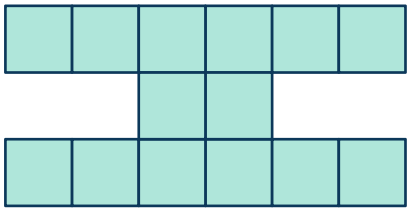


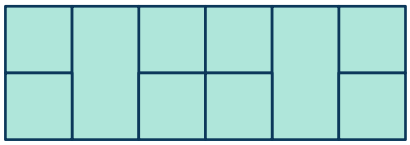
D.

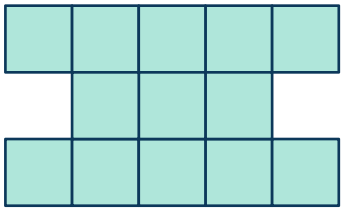


30 Which shape has an area of 13 square units?

A. 

B. 

C. 

D. 

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31 Which equation is equivalent to 7 x 9? Select all the correct answers.

A. 7 + (5 + 4)
B. (5 x 9) + (2 x 9)
C. 7 x (5 + 4)
D. 5 x 2 x 9
E. (7 + 5) x (7 + 4)

32 A gardener has 12 pots of soil. Each pot contains 3 kilograms of soil. How many kilograms of soil in total does the gardener have?

A. 15 kilograms

B. 36 kilograms

C. 24 kilograms

D. 32 kilograms

33

Which fraction shows point M?

A. $\frac{4}{5}$

B. $\frac{5}{6}$

C. $\frac{3}{4}$

D. $\frac{3}{5}$

34 Liam saved 345 dollars in January and 289 dollars in February. He spent 128 dollars in March. About how much money did Liam have at the end of March?

A. 500 dollars
B. 600 dollars
C. 400 dollars
D. 800 dollars

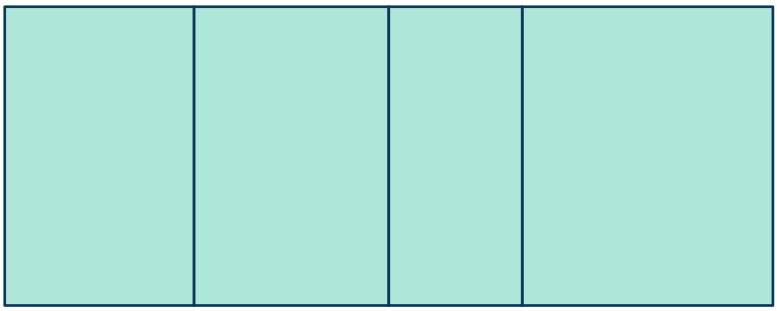
---

35 Nina practices piano for 30 minutes and then does homework for 25 minutes. After that, she watches TV for 20 minutes. If she finishes watching TV at 8:15 PM, what time did Nina start practicing piano?

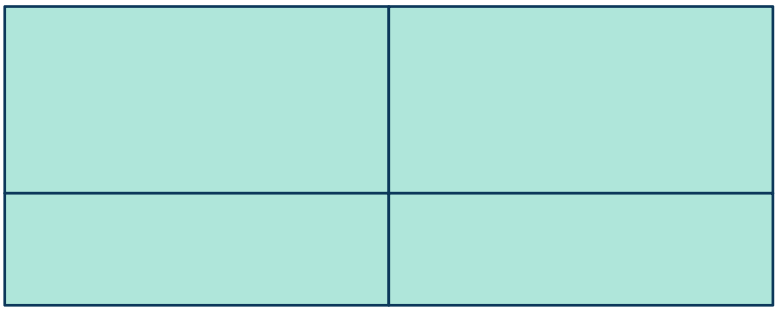
A. 7:15 PM
B. 7:00 PM
C. 7:30 PM
D. 7:20 PM

36 Which rectangle is divided into 4 equal parts?

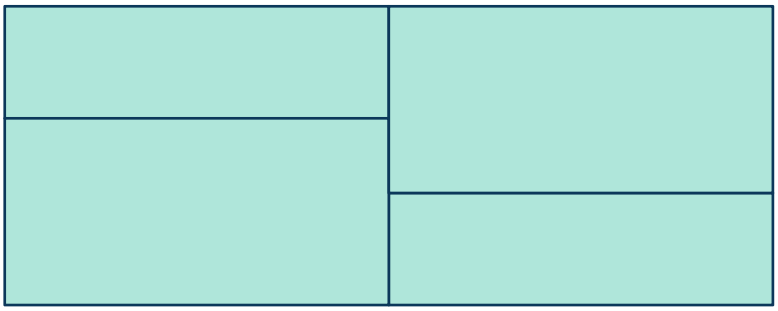
A.



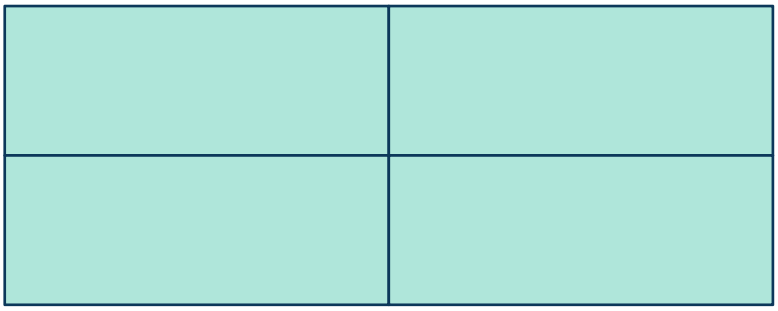
B.



C.



D.



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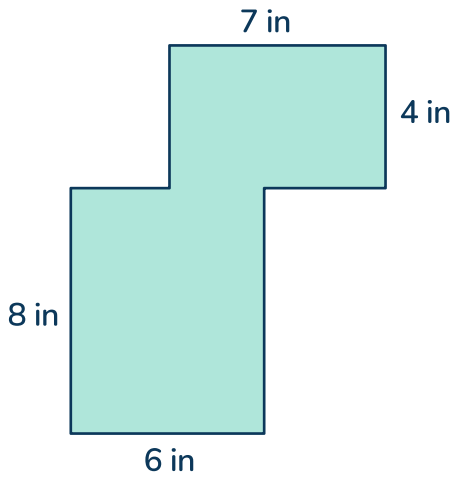
37 Each box contains 9 notebooks. There are 108 notebooks in total. How many boxes are there?

A. 9 boxes
B. 15 boxes
C. 12 boxes
D. 18 boxes

38 Miranda put two rectangles together to create the shape below.



What is the area, in square inches, of the shape that Miranda created?

A. 25 square inches
B. 76 square inches
C. 154 square inches
D. 74 square inches

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39 How can you arrange 36 pencils in equal rows? Select all the correct answers.

A. 3 rows of 6
B. 6 rows of 6
C. 12 rows of 3
D. 8 rows of 4
E. 9 rows of 4

40 Which context can be represented by 56 ÷ 8?

A. Jamie has 8 boxes. He puts 56 pencils equally into the boxes.
B. There were 8 pencils and Jamie bought 56 more.
C. Jamie made 56 pencils. He made 8 times as many pencils as Taylor.
D. There were 56 pencils. Then Jamie gave away 8 pencils.

Standard: 3.OA.1, 3.OA.2, 3.OA.4
DOK 3
Short Answer Response - 2 points

41 Malia is solving △ ÷ 4 = 7. She uses 7 x 4 = △ to find the value of △. Will this solving strategy work? Why or why not?

_____

_____

_____

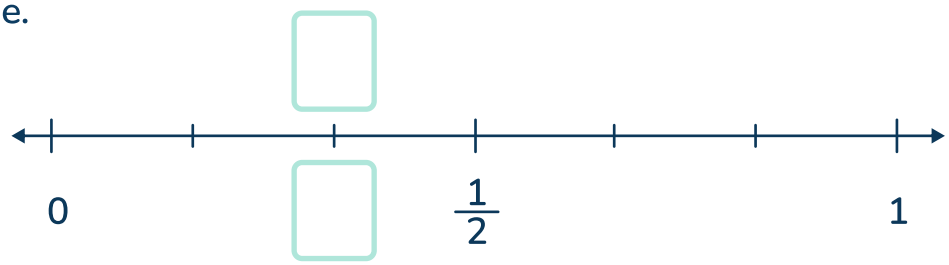
Standard: 3.MD.4, 3.NF.3
DOK 3
Short Answer Response - 2 points

42 Sanjay is growing 12 plants. Sanjay records the height of each plant (in feet):
$\frac{1}{2}, \frac{1}{4}, \frac{3}{4}, \frac{1}{4}, \frac{5}{8}, \frac{1}{2}, 1, \frac{5}{8}, \frac{1}{4}, \frac{1}{2}, \frac{5}{8}, \frac{5}{8}$.

Graph the height of Sanjay's plants on the line plot below.

Standard: 3.NF.2, 3.NF.3
DOK 3
Extended Response - 4 points

43 **PART A:** Fill in the blanks with the two equivalent fractions shown on the number line.



PART B: Show where the fraction $\frac{4}{4}$ belongs on the number line. Explain how you know.

_____

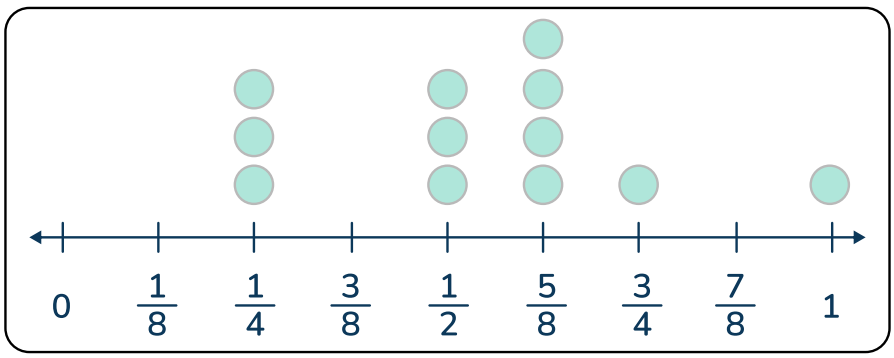
_____

Answer Key - Multiple Choice

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

Item number	Correct answer	Standard(s)	DOK
20	A	**3.OA.6**	DOK 1
21	C	**3.NBT.2**	DOK 2
22	C	**3.NF.3c**	DOK 1
23	B	**3.OA.2**	DOK 1
24	B, D, E	**3.MD.7, 3.OA.1**	DOK 2
25	D	**3.G.1**	DOK 1
26	A	**3.NF.3a, 3.NF.3b**	DOK 1
27	B	**3.OA.4**	DOK 1
28	C	**3.OA.8**	DOK 2
29	D	**3.NF.2**	DOK 2
30	D	**3.MD.5**	DOK 1
31	B, C	**3.OA.5**	DOK 2
32	B	**3.MD.2**	DOK 1
33	A	**3.NF.2**	DOK 1
34	A	**3.NBT.2, 3.OA.8**	DOK 2
35	B	**3.MD.1**	DOK 2
36	D	**3.G.2**	DOK 1
37	C	**3.OA.3**	DOK 1
38	B	**3.MD.7d**	DOK 2
39	B, C, E	**3.OA.1**	DOK 1
40	A	**3.OA.2**	DOK 1

Item	KEY	Rationale
41	2 points	Student correctly identifies that Malia's strategy will work and clearly explains the connection between the two equations.
	1 point	Student correctly identifies that Malia's strategy will work but does not clearly explain the connection between the two equations.
	0 points	Student is incorrect or leaves the response blank.

Item	KEY	Rationale
42	2 points	Student correctly creates a scale on the line plot and records each fraction. 
	1 point	Student creates a scale on the line plot and records each fraction, making 1 or 2 mistakes.
	0 points	Student makes more than 2 mistakes or leaves the response blank.

Item	KEY	Rationale
43	4 points	Student correctly identifies the missing fractions as $\frac{1}{3}$ and $\frac{2}{6}$ and $\frac{4}{4}$ as 1. Student clearly explains that 4 fourths is 4 out of 4 and equal to 1 whole.
	3 points	Student correctly identifies the missing fractions as $\frac{1}{3}$ and $\frac{2}{6}$ and $\frac{4}{4}$ as 1, but does not clearly explain why $\frac{4}{4}$ is equal to 1 whole.
	2 points	Student correctly identifies 1 of the 2 the missing fractions as $\frac{1}{3}$ and $\frac{2}{6}$ and $\frac{4}{4}$ as 1. Student explains that 4 fourths is 4 out of 4 and equal to 1 whole.
	1 point	Student incorrectly identifies 2 out of the 3 fractions - the missing fractions or $\frac{4}{4}$.
	0 points	Student does not identify any of the fractions correctly or leaves the response blank.

ANSWERS SORTED BY CCSS STRAND

OA			
1	C	**3.OA.1**	DOK 2
2	D	**3.OA.8**	DOK 2
6	A	**3.OA.4**	DOK 1
9	A, D, E	**3.OA.3**	DOK 2
11	D, E	**3.OA.9**	DOK 2
12	C	**3.OA.8**	DOK 2
20	A	**3.OA.6**	DOK 1
23	B	**3.OA.2**	DOK 1
27	B	**3.OA.4**	DOK 1
28	C	**3.OA.8**	DOK 2
31	B,C	**3.OA.5**	DOK 2
37	C	**3.OA.3**	DOK 1
39	B,C,E	**3.OA.1**	DOK 1
40	A	**3.OA.2**	DOK 1
41	Short Answer Response	**3.OA.1, 3.OA.2, 3.OA.4**	DOK 3

NBT			
5	B	**3.NBT.3**	DOK 1
13	B	**3.NBT.1**	DOK 1
21	C	**3.NBT.2**	DOK 2
34	A	**3.NBT.2, 3.OA.8**	DOK 2

NF			
7	C	**3.NF.3d**	DOK 1
10	D	**3.NF.2, 3.NF.3**	DOK 2
15	D	**3.NF.1, 3.NF.2a**	DOK 1
17	D	**3.NF.3d**	DOK 2
22	C	**3.NF.3c**	DOK 1
26	A	**3.NF.3a, 3.NF.3b**	DOK 1
29	D	**3.NF.2**	DOK 2
33	A	**3.NF.2**	DOK 1
43	Short Answer Response	**3.NF.2, 3.NF.3**	DOK 3

MD			
3	B	**3.MD.5, 3.MD.6**	DOK 1
8	C	**3.MD.3**	DOK 2
14	C	**3.MD.1**	DOK 1
16	A	**3.MD.2**	DOK 2
19	A,B,D	**3.MD.8**	DOK 2
24	B,D,E	**3.MD.7, 3.OA.1**	DOK 2
30	D	**3.MD.5**	DOK 1
32	B	**3.MD.2**	DOK 1
35	B	**3.MD.1**	DOK 2
38	B	**3.MD.7d**	DOK 2
42	Short Answer Response	**3.MD.4, 3.NF.4**	DOK 3

G			
4	C	**3.G.2, 3.NF.1**	DOK 1
18	C	**3.G.1**	DOK 2
25	D	**3.G.1**	DOK 1
36	D	**3.G.2**	DOK 1

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