THIRD SPACE LEARNING

3rd Grade Massachusetts State Test

Massachusetts Practice Test
Grade 3

Grade 3

Questions

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

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

1 Erika has 8 chairs. Each chair has 4 legs. Each leg has 6 screws. Which equation shows the total number of legs?

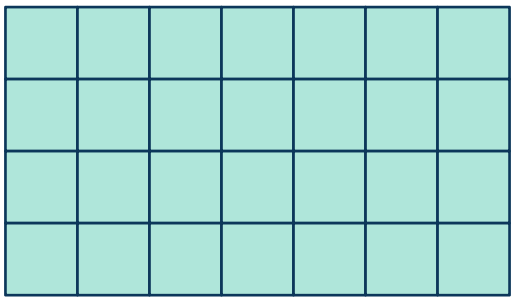
A. 6 x 4
B. 8 x 4
C. 4 x 6
D. 8 x 6

2 The bakery has 15 loaves of bread. A delivery brings 4 boxes with 6 loaves in each box. How many loaves of bread does the bakery have now?

Which equation can be used to solve?

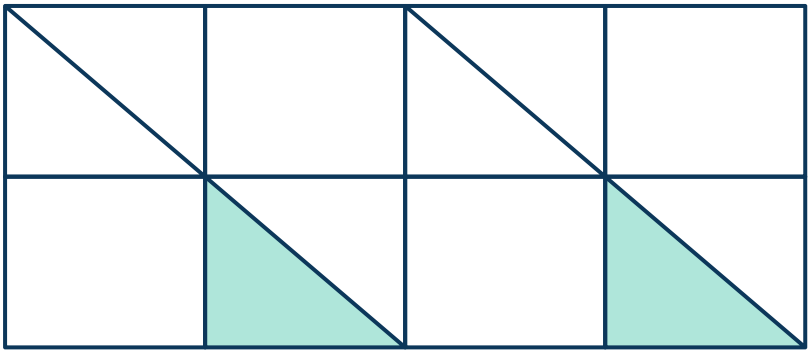
A. $15 + 4 + 6 = b$
B. $6 + 4 \times 15 = b$
C. $(15 + 4) \times 6 = b$
D. $4 \times 6 + 15 = b$

3 What is the area of the rectangle?



A. 24 units
B. 24 square units
C. 28 square units
D. 28 units

4



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

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

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

C. $\frac{1}{6}$

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

5 $4 \times 90 = h$

What is the value of h?

A. 360
B. 490
C. 180
D. 130

---

6 What number makes the equations true?

7 x _____ = 63

63 ÷ 7 = _____

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

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

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

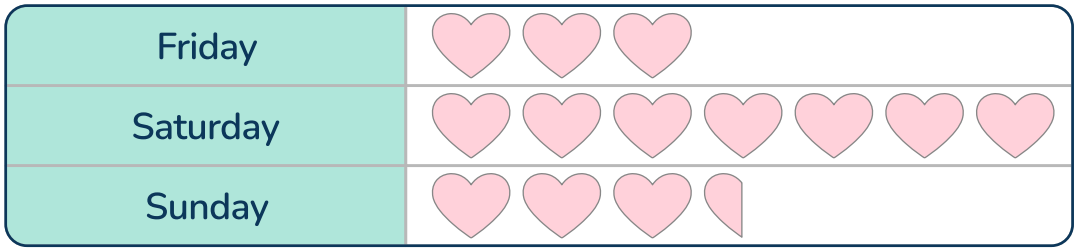
B. $\frac{5}{6}$

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

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

8

Animal Shelter Pet Adoptions



= 6 pet adoptions

How many more pet adoptions were there on Saturday than on Friday and Sunday?

A. 6

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

C. 3

D. 2

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 green.
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?

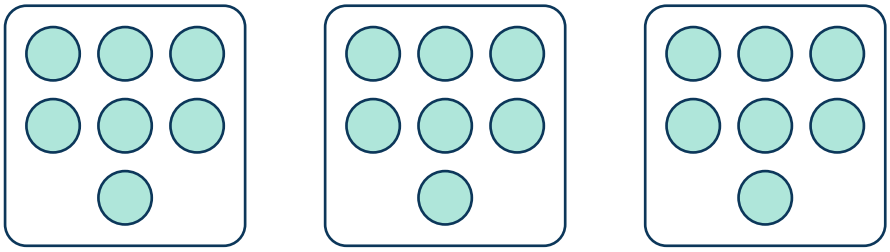
A. $\frac{6}{9}$

B. $\frac{6}{8}$

C. $\frac{5}{9}$

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

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 3 bins of teddy bears. Each bin has 7 teddy bears. How many teddy bears are there in total?
D. There are 7 books. Each book has 21 pages. How many pages does one book have?
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 Raj has 4 rabbits. Each rabbit eats 2 cups of food each day. Raj has 32 cups of rabbit food. How many more days can Raj feed his rabbits with the food he has?

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

13 What is 4,963 rounded to the nearest hundred?

A. 4,900
B. 4,960
C. 5,900
D. 5,000

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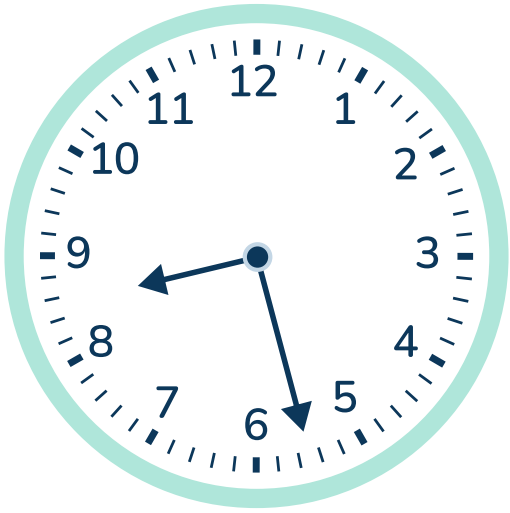
14 What time is shown on the clock?



A. 8:52
B. 5:42
C. 5:08
D. 8:27

15 Which number line correctly shows the fraction $\frac{1}{6}$?

A.

B.

C.

D.

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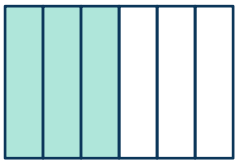
16 Which is the best estimate for the weight of a banana?

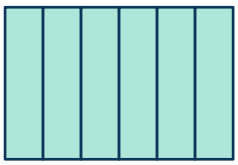
A. 10 grams
B. 100 grams
C. 1 kilogram
D. 10 kilograms

17 Which shape correctly completes the comparison?

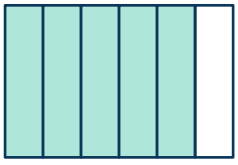
A.



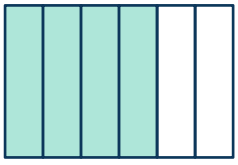
B.



C.



D.



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18 Select all answers that correctly complete the sentence: A rectangle and a parallelogram both always have...

A. ...four right angles.
B. ...four sides.
C. ...equal sides.
D. ...opposite sides that are parallel.

19 Carlos has 24 meters of rope to create the border of a rectangular playground. What are the possible dimensions of the playground that Carlos can completely rope off? Select all the correct answers.

A. 10 meters by 2 meters
B. 12 meters by 12 meters
C. 8 meters by 4 meters
D. 4 meters by 6 meters
E. 3 meters by 9 meters

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20 Which equation can help you solve $42 \div 6 = \triangle$?

A. $6 \div \triangle = 42$
B. $6 \times \triangle = 42$
C. $\triangle \div 6 = 42$
D. $\triangle \times 42 = 6$

21 Solve 834 – 549.

A. 285
B. 315
C. 325
D. 295

22

What is the missing value?

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

23 A farmer has 72 apples. He wants to pack them into 8 boxes, with the same number of apples in each box. Which equation can find the number of apples in each box?

A. $72 \times 8 = ?$
B. $72 - 8 = ?$
C. $72 + 8 = ?$
D. $72 \div 8 = ?$

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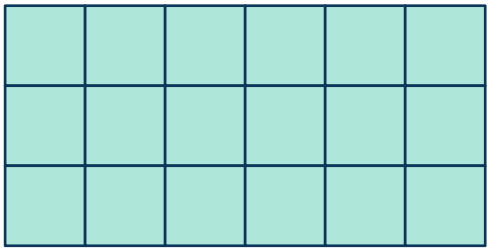
24 The shape below is made of square units.

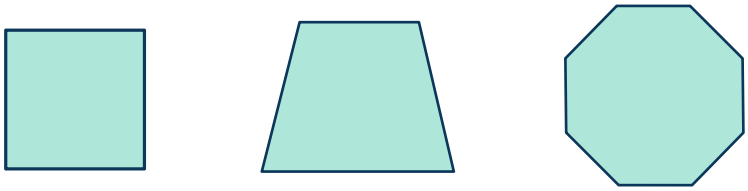


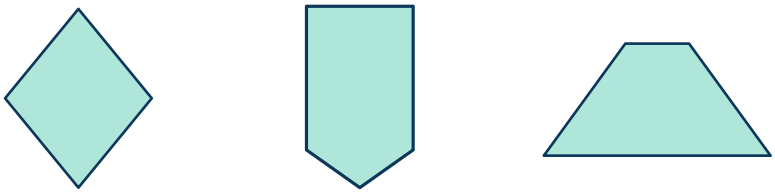
Which expressions can be used to find the area of the shape? Select all the correct answers.

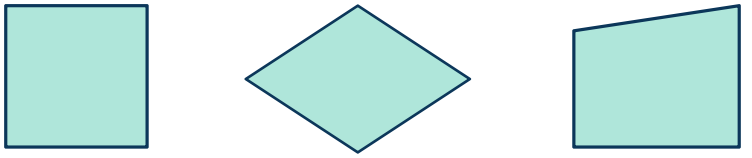
A. $3 + 6$
B. $3 + 6 + 3 + 6$
C. 3×6
D. $3 + 3 + 3 + 3$
E. $6 + 6 + 6$

25 Which group of shapes only has quadrilaterals?

A. 

B. 

C. 

D. 

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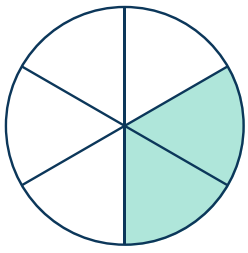
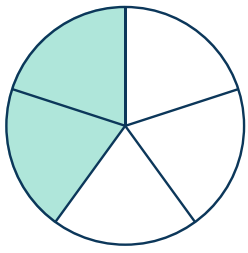
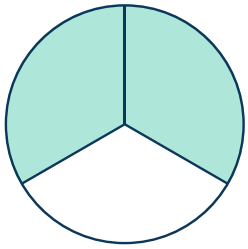
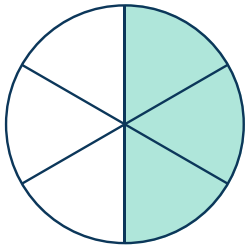
26 Which shape shows a shaded amount equivalent to $\frac{1}{3}$?

A. 

C. 

B. 

D. 

27 Billy is solving ? ÷ 5 = 8. Which equation can help Billy solve?

A. 5 x 8 = ?
B. 8 ÷ ? = 5
C. ? x 5 = 8
D. 8 ÷ 5 = ?

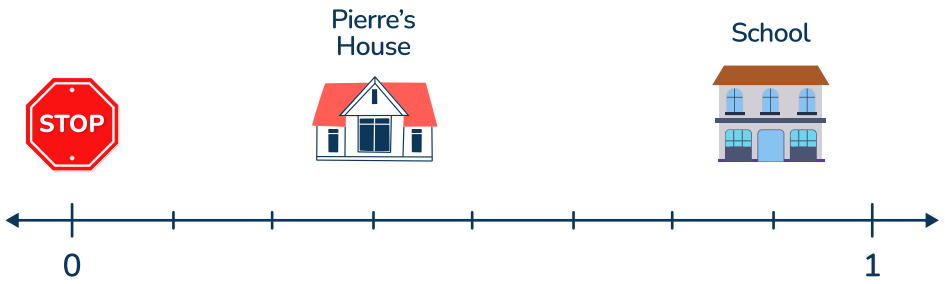
28 On Tuesday, Maria solved 12 math problems. For the next 5 days, Maria will solve 10 problems each day. By the end of the week, how many total math problems will Maria have solved?

A. 52 problems
B. 62 problems
C. 70 problems
D. 80 problems

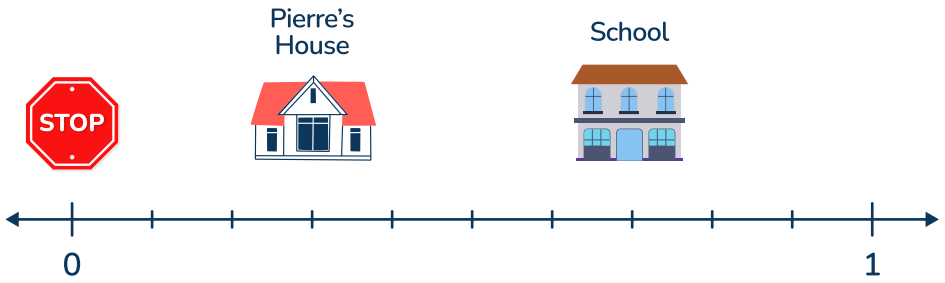
29 Pierre lives on a 1-mile street. Pierre lives $\frac{3}{10}$ of a mile from the stop sign. There is a school $\frac{7}{10}$ of a mile from the stop sign. Which number line correctly shows Pierre's house and the school?

A.

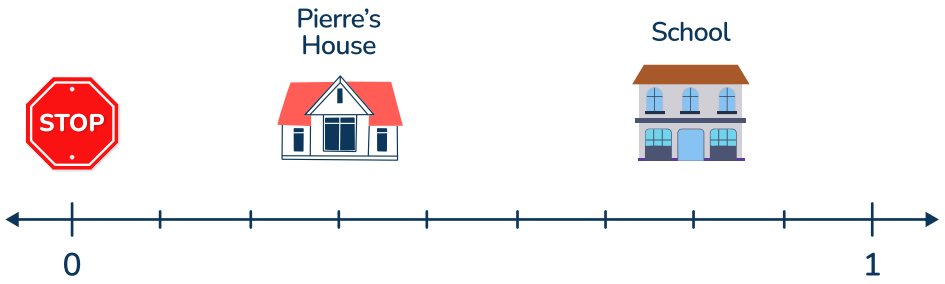
B.



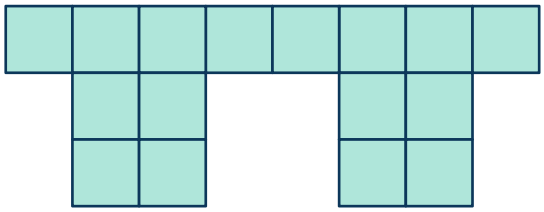
C.

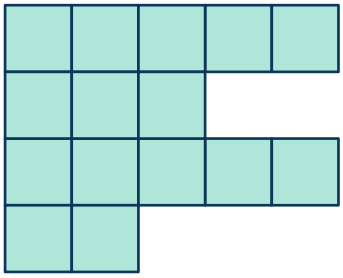


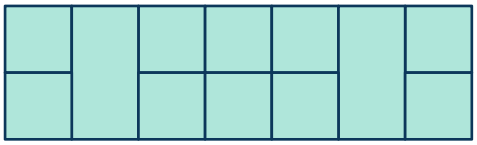
D.

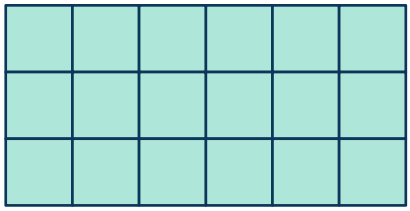


30 Which shape has an area of 15 units?

A. 

B. 

C. 

D. 

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31 Which equation is equivalent to 5 x 9? Select all the correct answers.

A. (2 x 9) + (3 x 9)
B. 5 + (5 + 4)
C. 5 x (6 + 3)
D. 3 x 2 x 9
E. (5 + 5) x (5 + 4)

32 A gardener has 8 pots of flowers. Each pot has 16 flowers. How many flowers does the gardener have in total?

A. 2 flowers
B. 24 flowers
C. 84 flowers
D. 128 flowers

33

Which fraction shows point Q?

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

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

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

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

34 Reagan earned 379 points on Level 1 and 521 points on Level 2. She lost 88 points on Level 3. ***About*** how many points did Reagan have at the end of Level 3?

A. 800 points
B. 700 points
C. 600 points
D. 1,000 points

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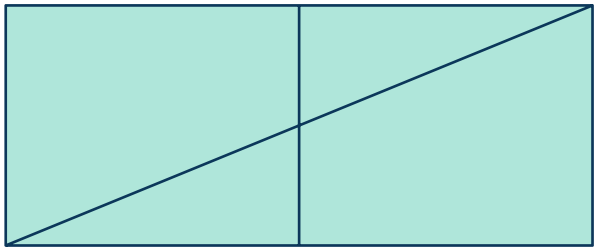
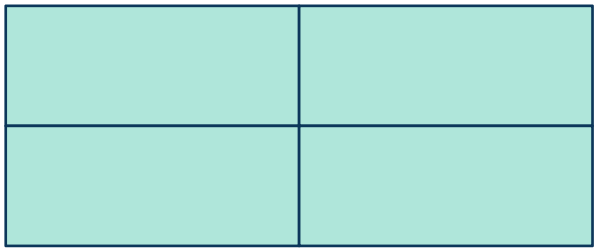
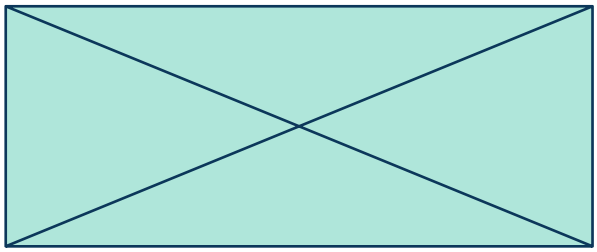
35 Lila works on her homework for 30 minutes, then practices the piano for 25 minutes, and finally takes a break for 15 minutes. If she finishes her break at 5:45 pm, what time did Lila start working on her homework?

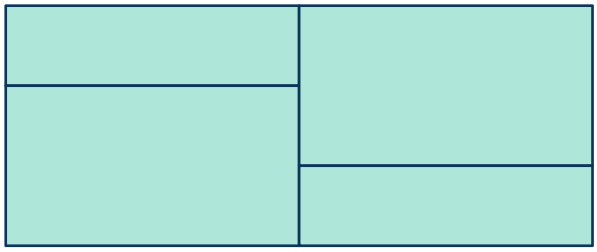
A. 5:05 pm
B. 4:50 pm
C. 4:45 pm
D. 4:35 pm

36 Which rectangle is divided into 4 equal parts?

A. 

B. 

C. 

D. 

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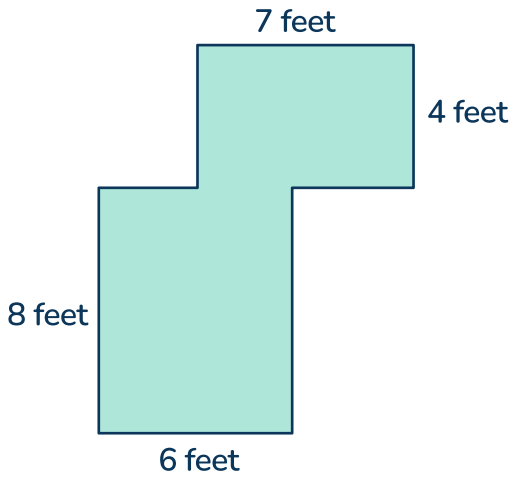
37 Each package contains 5 cookies. There are 40 cookies in all. How many packages are there?

A. 8 packages
B. 45 packages
C. 200 packages
D. 9 packages

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



What is the area, in square feet, of the shape that Jillian created?

A. 25 square feet
B. 69 square feet
C. 44 square feet
D. 76 square feet

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

A. 3 rows of 12
B. 6 rows of 6
C. 12 rows of 2
D. 4 rows of 8
E. 9 rows of 4

40 Which context can be represented by 56 ÷ 8?

A. Maria made 56 pencils. She made 8 times less pencils than Sam.
B. Maria has 8 boxes. She puts 56 pencils equally into the boxes.
C. There were 56 pencils. Then Maria gave away 8 pencils.
D. There were 8 pencils, and Maria bought 56 more.

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

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

_____
_____
_____

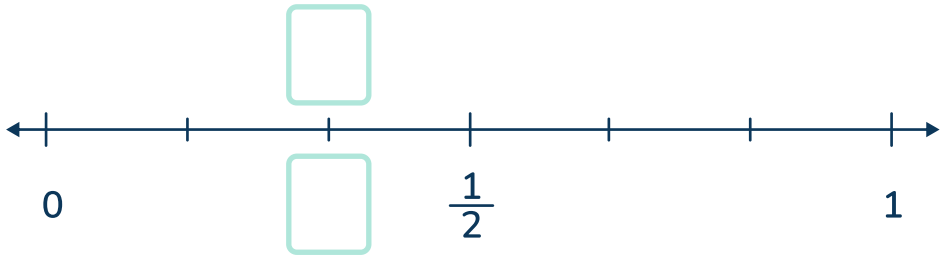
Standard: 3.MD.4, 3.NF.3
DOK 3
Short Answer Response - 2 points

42 Jaden is growing 12 plants. Jaden 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 Jaden'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.



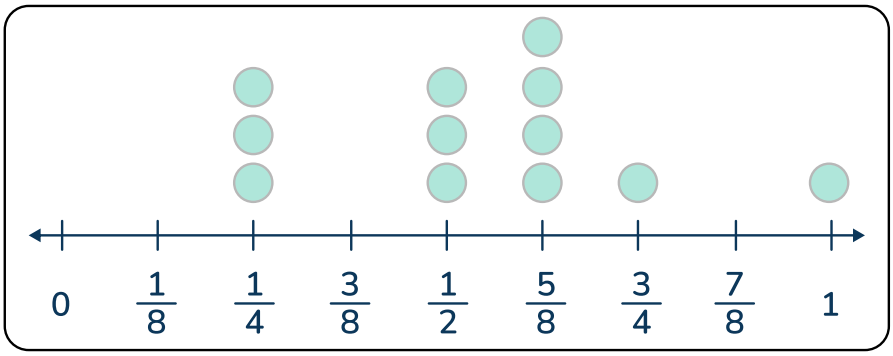
PART B: Show where the fraction $\frac{4}{4}$ belongs on the number line. Explain how you know.

Answer Key - Multiple Choice

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

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

Item	KEY	Rationale
41	2 points	Student correctly identifies that Grace's strategy will work and clearly explains the connection between the two equations.
	1 point	Student correctly identifies that Grace'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	B	**3.OA.1**	DOK 2
2	D	**3.OA.8**	DOK 2
6	C	**3.OA.4**	DOK 1
9	A, D, E	**3.OA.3**	DOK 2
11	C, E	**3.OA.9**	DOK 2
12	B	**3.OA.8**	DOK 2
20	B	**3.OA.6**	DOK 1
23	D	**3.OA.2**	DOK 1
27	A	**3.OA.4**	DOK 1
28	B	**3.OA.8**	DOK 2
31	A, C	**3.OA.5**	DOK 2
37	A	**3.OA.3**	DOK 1
39	A, B, E	**3.OA.1**	DOK 1
40	B	**3.OA.2**	DOK 1
41	Short Answer Response	**3.OA.1, 3.OA.2, 3.OA.4**	DOK 3

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

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

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

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

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