




Eyes on Math

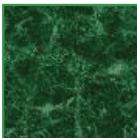
Pictures for Grades 6–8

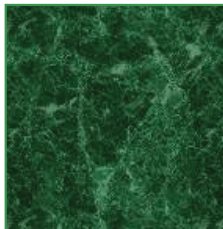
	CCSS	Book pages	PDF page
Common Factors	6.NS	154–155	2
Common Multiples	6.NS	156–157	3
Square Roots	8.EE	158–159	4
Fraction Division	6.NS	160–161	5
Ratios: Multiple Ratios Describe Any Situation	6.RP	162–163	6
Equivalent Ratios	6.RP	164–165	7
Equivalent Rates	6.RP	166–167	8
Solving Rate Problems	6.RP	168–169	9
Describing Percent	6.RP	170–171	10
Uses of Integers	6.NS	172–173	11
The Zero Principle	7.NS	174–175	12
Subtraction of Integers as a Directed Distance	7.NS	176–177	13
Multiplication and Division of Integers	7.NS	178–179	14
Area of a Parallelogram	6.G	180–181	15
Area of a Triangle	6.G	182–183	16
The Pythagorean Theorem	8.G	184–185	17
Pi	7.G	186–187	18
How Measures Are and Are Not Related	7.G	188–189	19
Mean	6.SP	190–191	20
Variability	6.SP	192–193	21
Sampling	7.SP	194–195	22
Probability: What It Means	7.SP	196–197	23
Unpredictability	7.SP	198–199	24
Rotations, Reflections, and Translations	8.G	200–201	25
Scale Drawings	7.G	202–203	26
Dilatations	8.G	204–205	27
Angles with Parallel Lines	8.G	206–207	28
Equivalent Expressions	6.EE	208–209	29
Equation as a Balance	6.EE	210–211	30
Different Types of Equations	6.EE	212–213	31
What Is Linear?	7.RP, 8.EE	214–215	32
Role of the Slope in the Equation of a Line	8.EE	216–217	33
Systems of Equations	8.EE	218–219	34
Function Rules	8.F	220–221	35

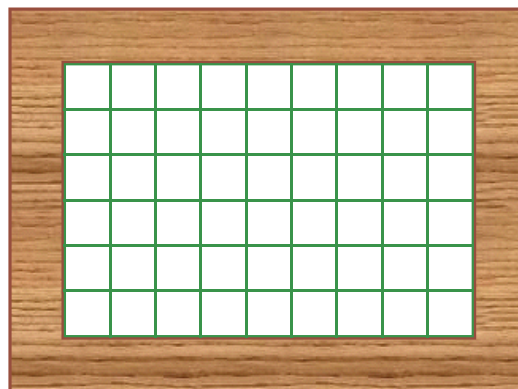
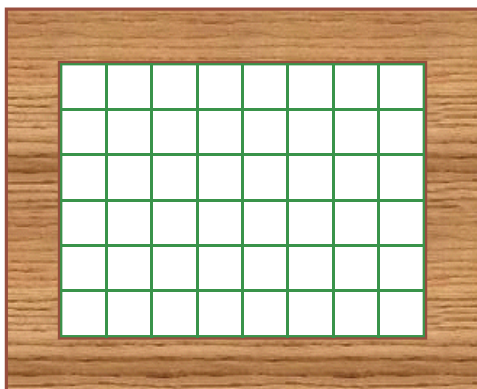
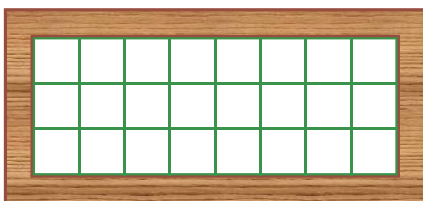
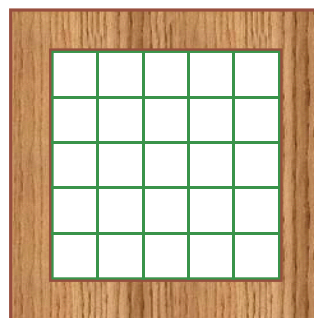
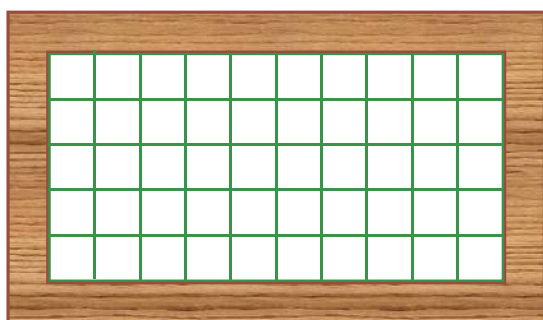
Which tiles can be used (without cutting) to perfectly fit each of these rectangle frames?

1×1 

2×2 

3×3 

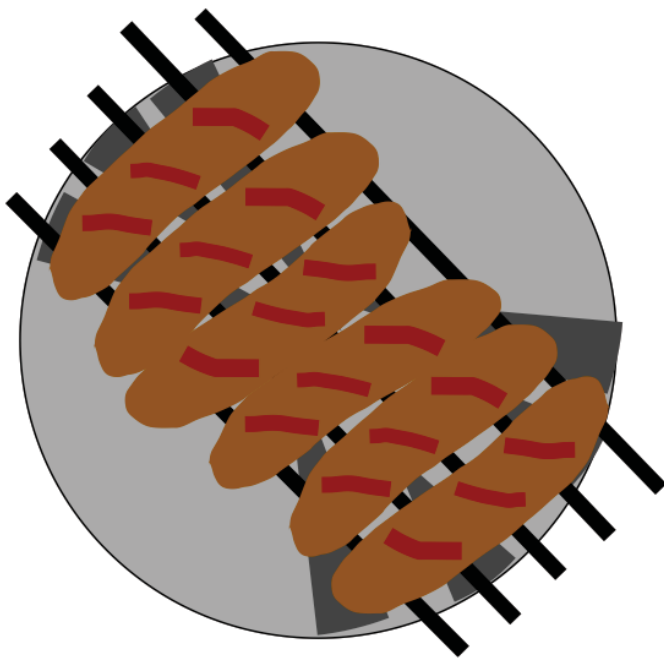
5×5 



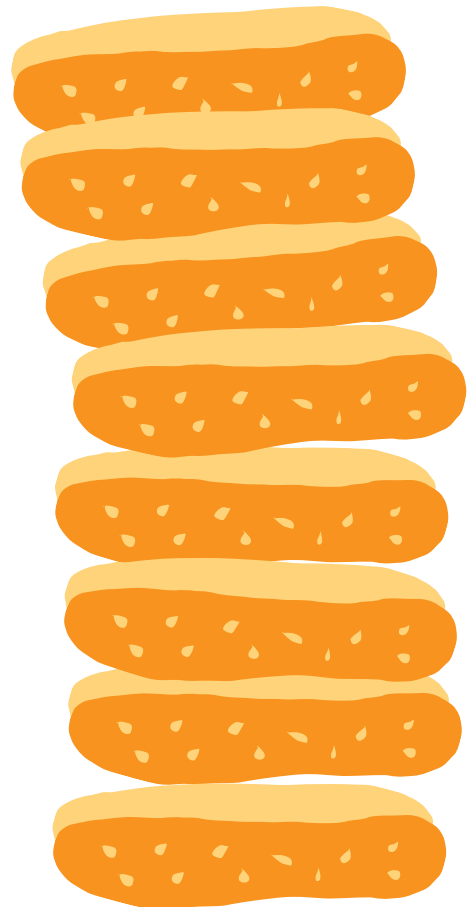
COMMON FACTORS • Grades 6–8 • CCSS 6.NS

How many packages of buns and packages of hot dogs would you need to buy to have a bun for each dog and none left over?

Hot dogs come in packages of 6



Hot dog buns come in packages of 8



COMMON MULTIPLES • Grades 6–8 • CCSS 6.NS

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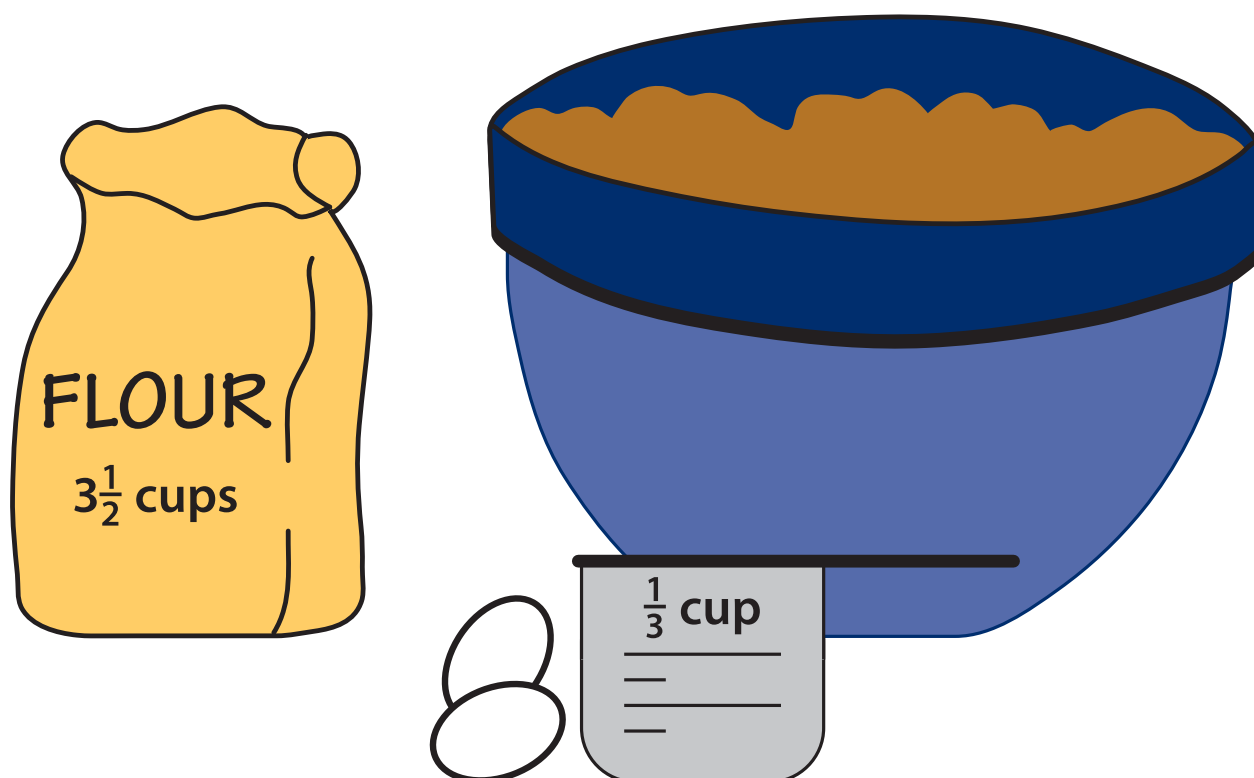
**If the field is square,
how do you know how wide it is?**



SQUARE ROOTS • Grades 6–8 • CCSS 8.EE

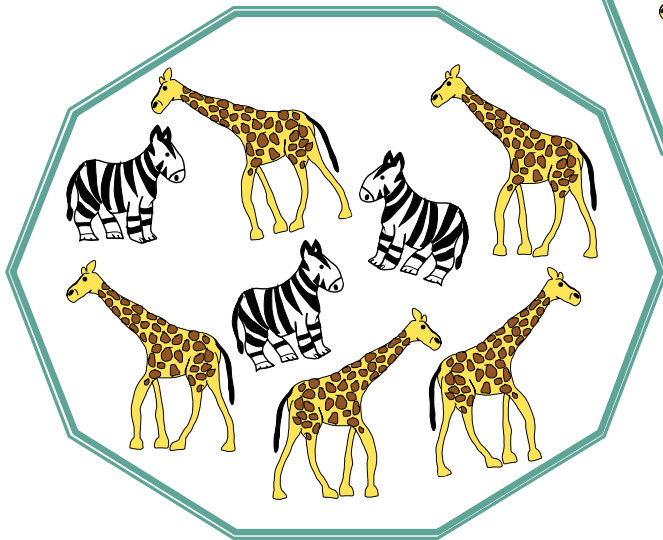
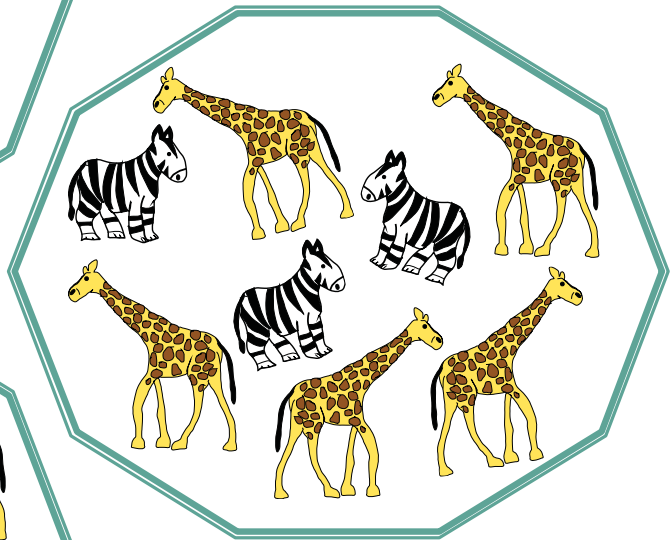
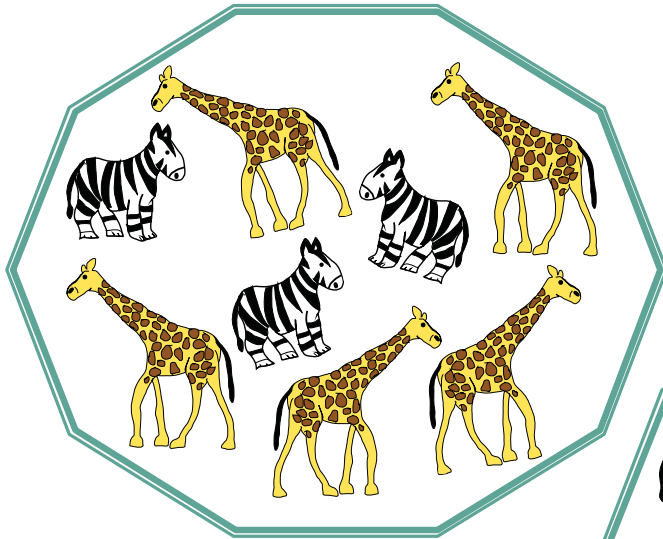
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What number sentence would you use to figure out how many times to fill the scoop to measure all of the flour?



FRACTION DIVISION • Grades 6–8 • CCSS 6.NS

What comparisons does the picture show?

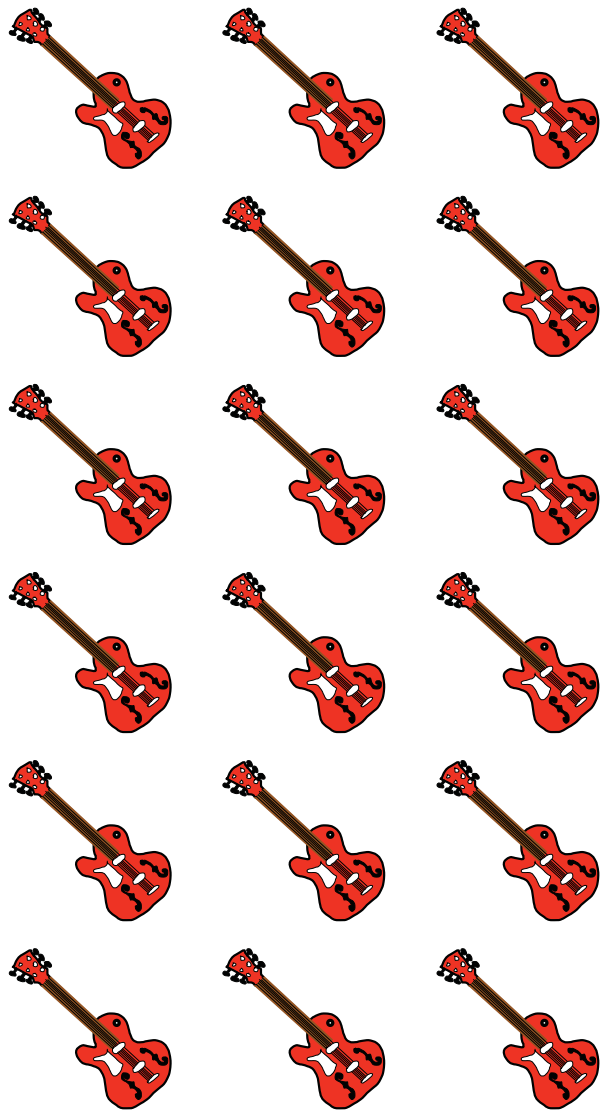


RATIOS: MULTIPLE RATIOS DESCRIBE ANY SITUATION • Grades 6–8 • CCSS 6.RP

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What numbers could you use
in the blanks to describe the picture?

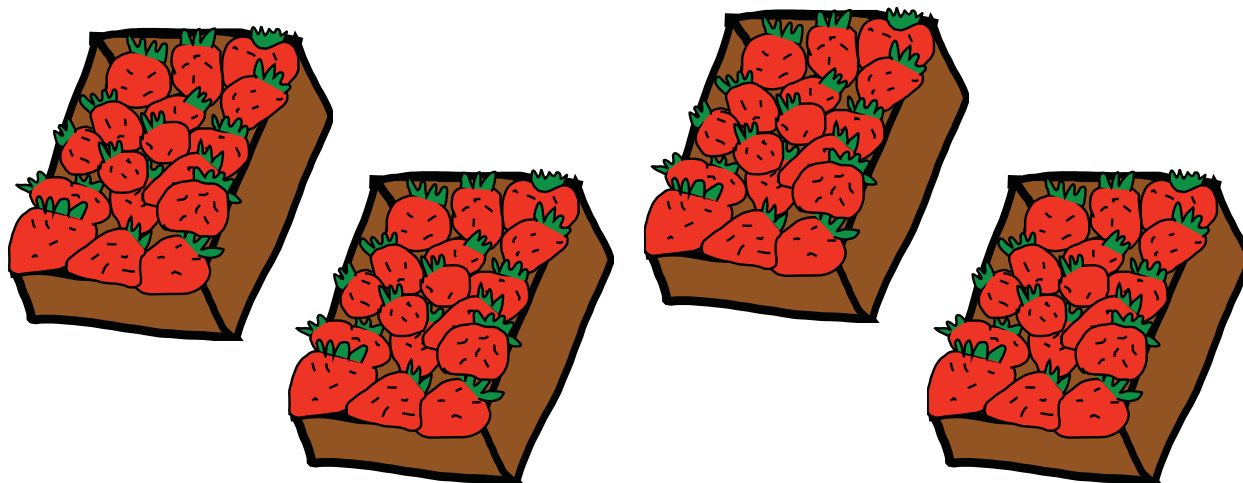
_____ of every _____ are guitars.



EQUIVALENT RATIOS • Grades 6–8 • CCSS 6.RP

Why might someone describe the price by saying the berries cost 50¢ a box, while someone else would say you can buy 2 boxes for \$1?

4 BOXES FOR \$2



EQUIVALENT RATES • Grades 6–8 • CCSS 6.RP

What calculations could you use to describe Andrea's speed? Which of those descriptions is most meaningful?

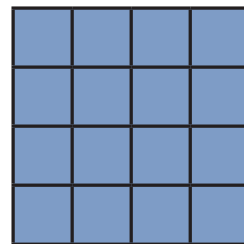
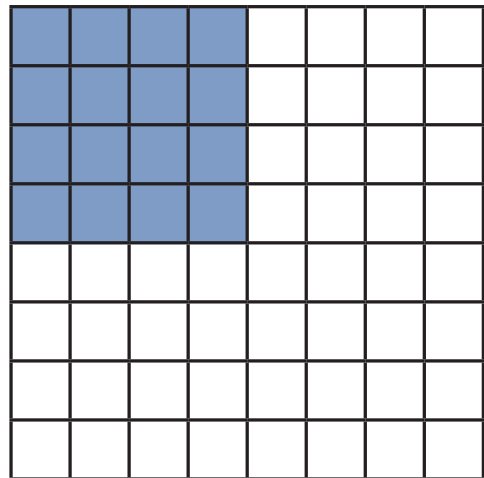
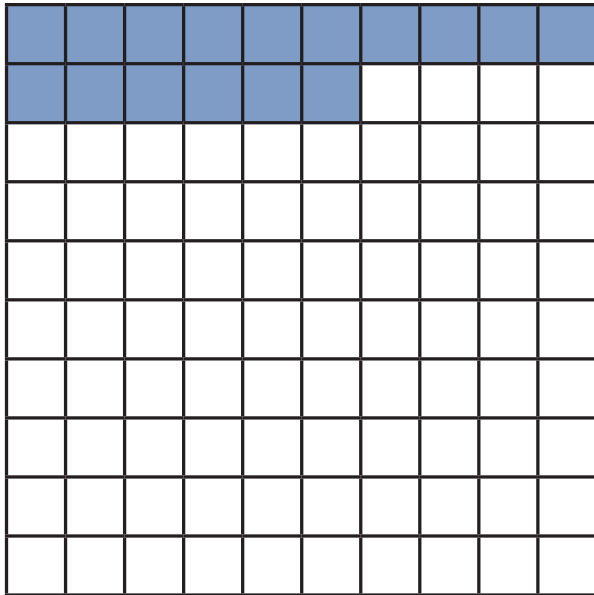
I have gone
12 km in the last
40 minutes.



SOLVING RATE PROBLEMS • Grades 6–8 • CCSS 6.RP

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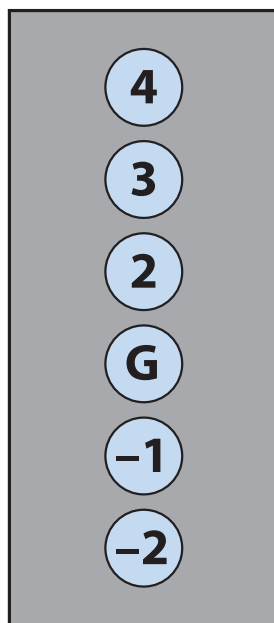
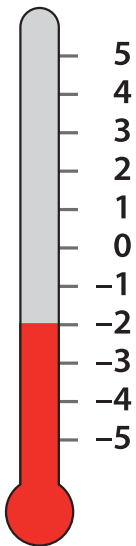
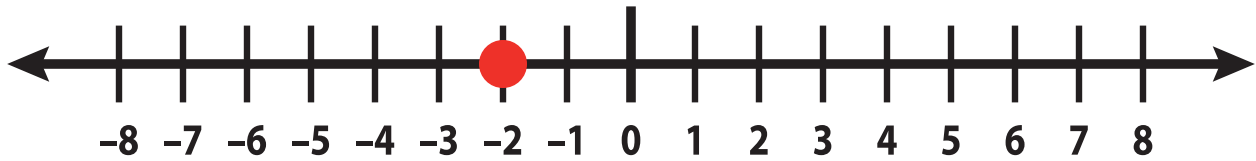
Which grid or grids show percent?



DESCRIBING PERCENT • Grades 6–8 • CCSS 6.RP

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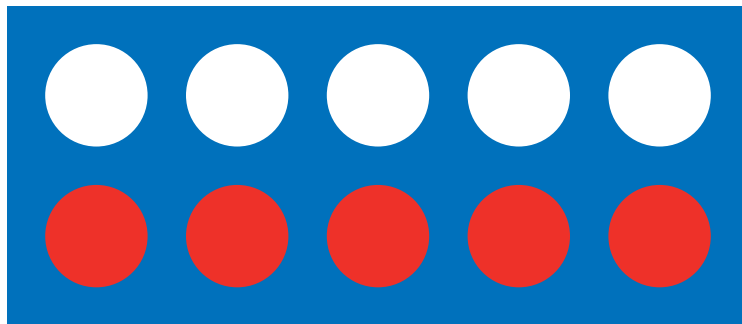
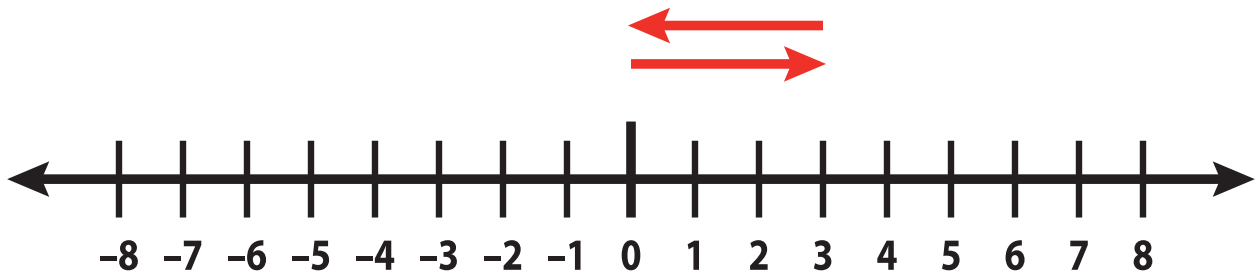
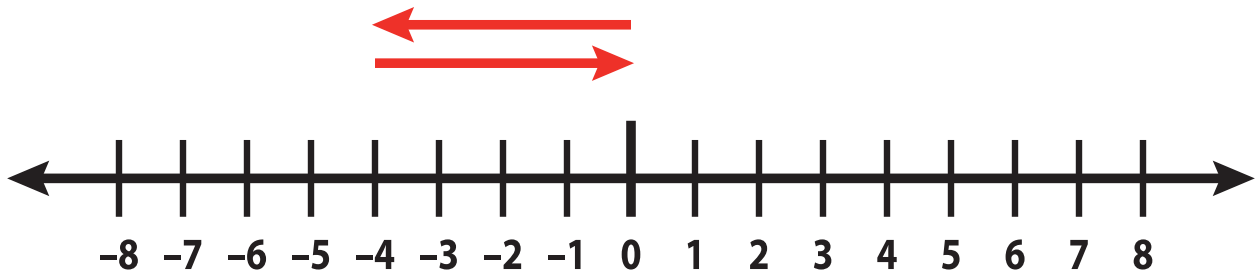
In which real-life situations might it make sense to use integers?



USES OF INTEGERS • Grades 6–8 • CCSS 6.NS

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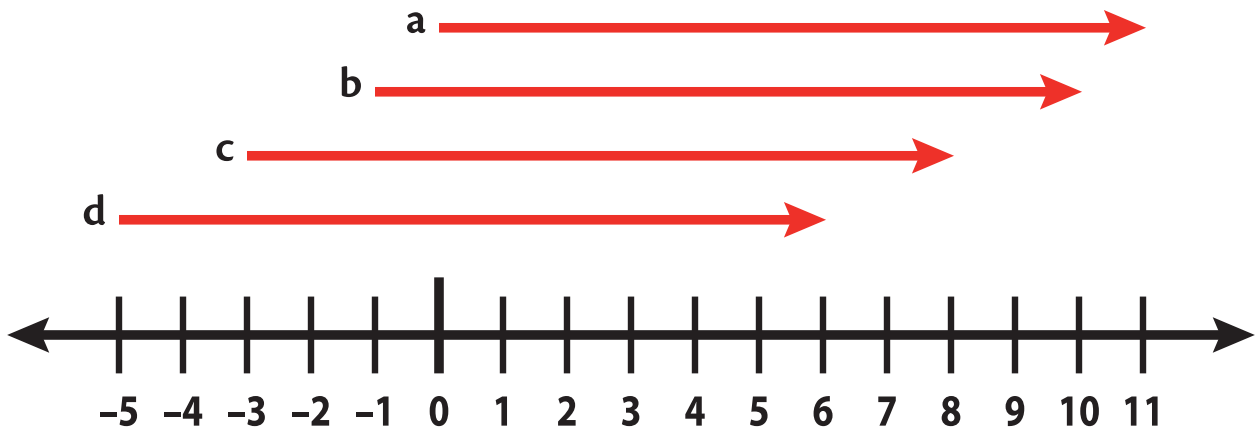
What do all of these pictures show?



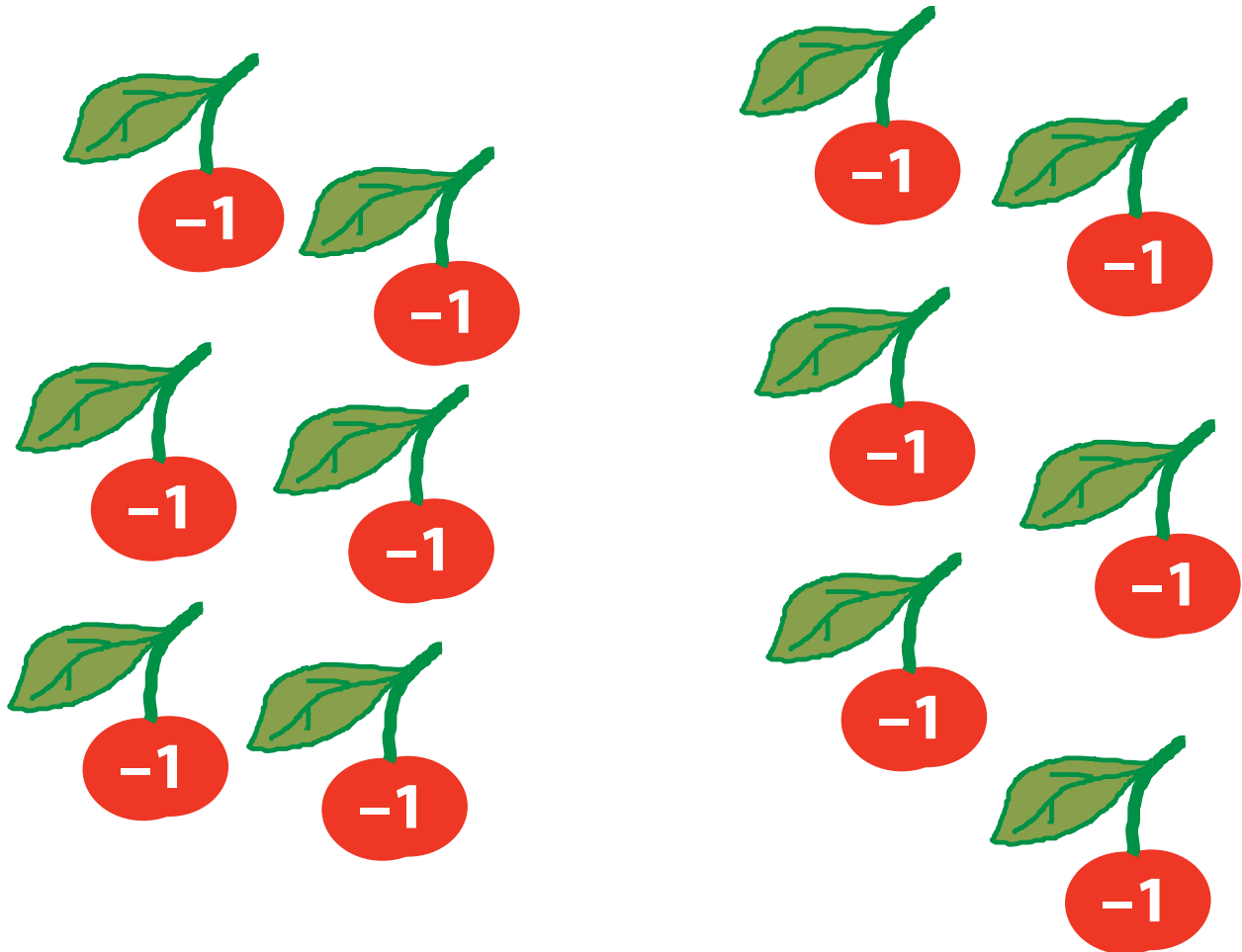
THE ZERO PRINCIPLE • Grades 6–8 • CCSS 7.NS

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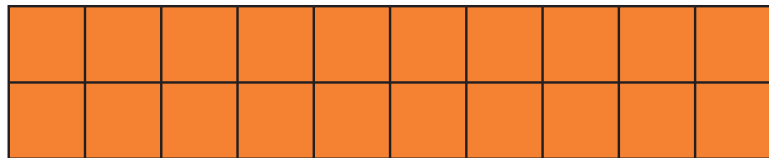
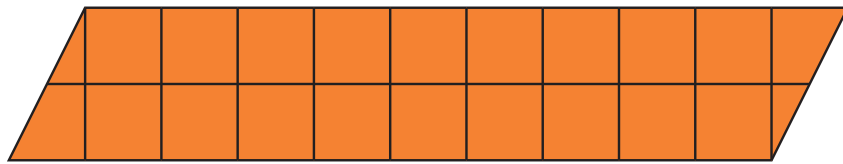
Do these arrows show
addition or subtraction?
What do you notice each time?



What multiplication and division sentences does the picture show?



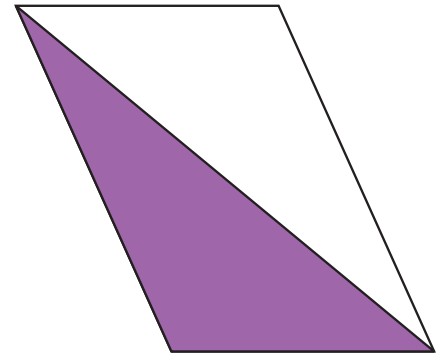
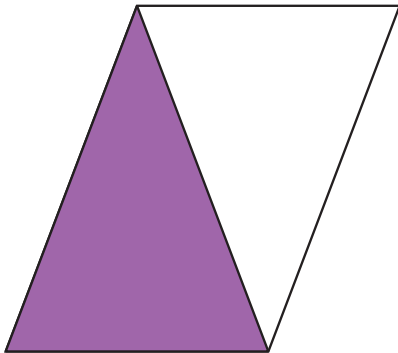
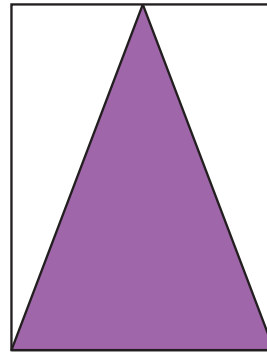
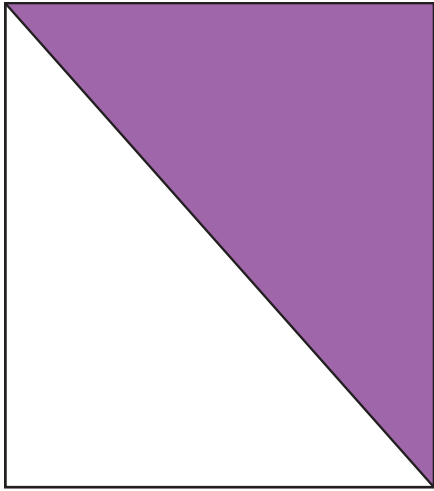
**How are the areas similar?
How are they different?**



AREA OF A PARALLELOGRAM • Grades 6–8 • CCSS 6.G

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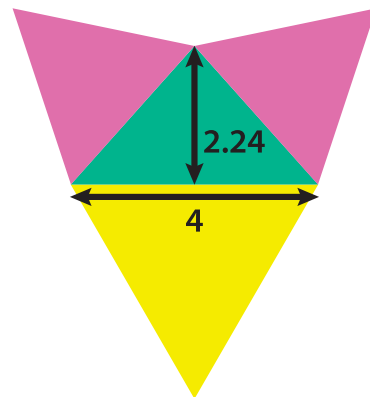
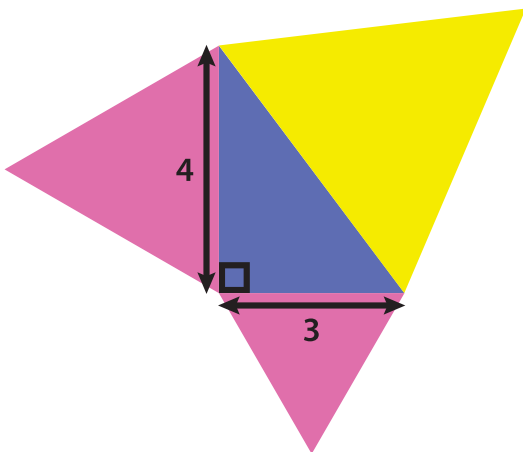
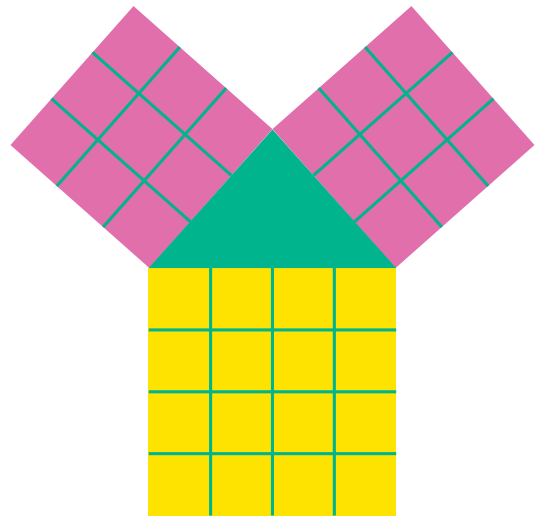
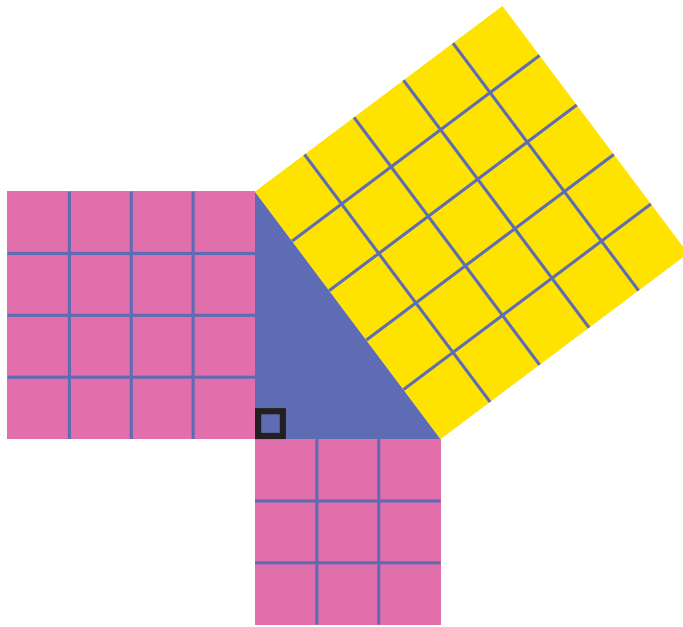
How are the areas of the purple triangles related to the areas of the other shapes?



AREA OF A TRIANGLE • Grades 6–8 • CCSS 6.G

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Figure out the areas of each of the colored squares and triangles.
 What do you notice?

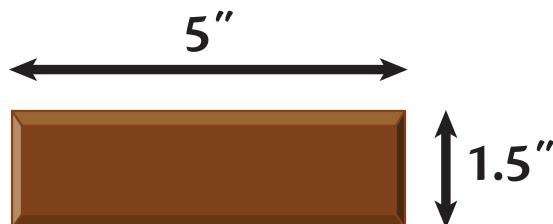
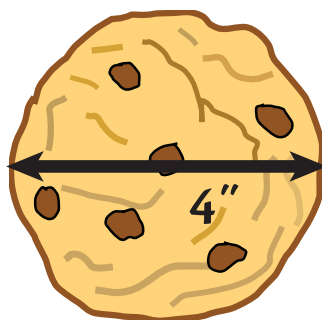
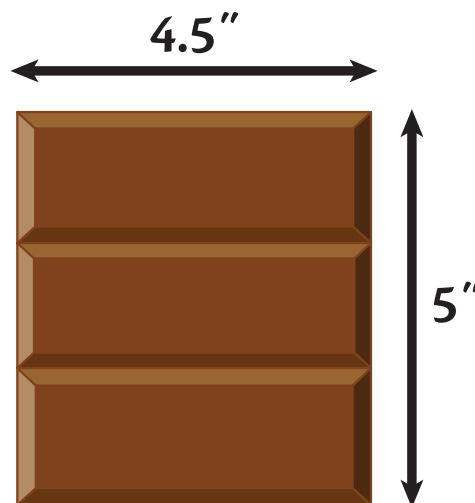
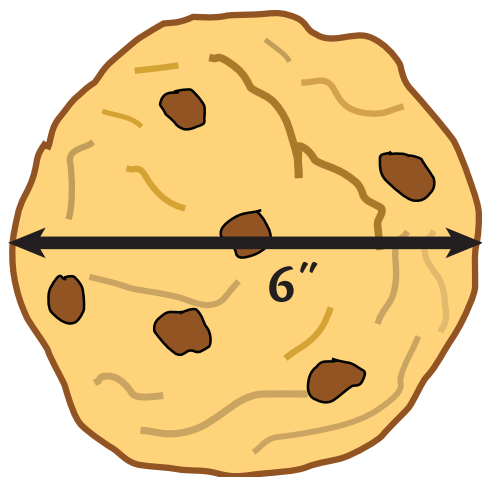


THE PYTHAGOREAN THEOREM • Grades 6–8 • CCSS 8.G

Notice that there is a yellow string across each circle and pieces of brown string around each circle. If you drew another circle and divided the circumference by the diameter, what number would you get?
How do you know?



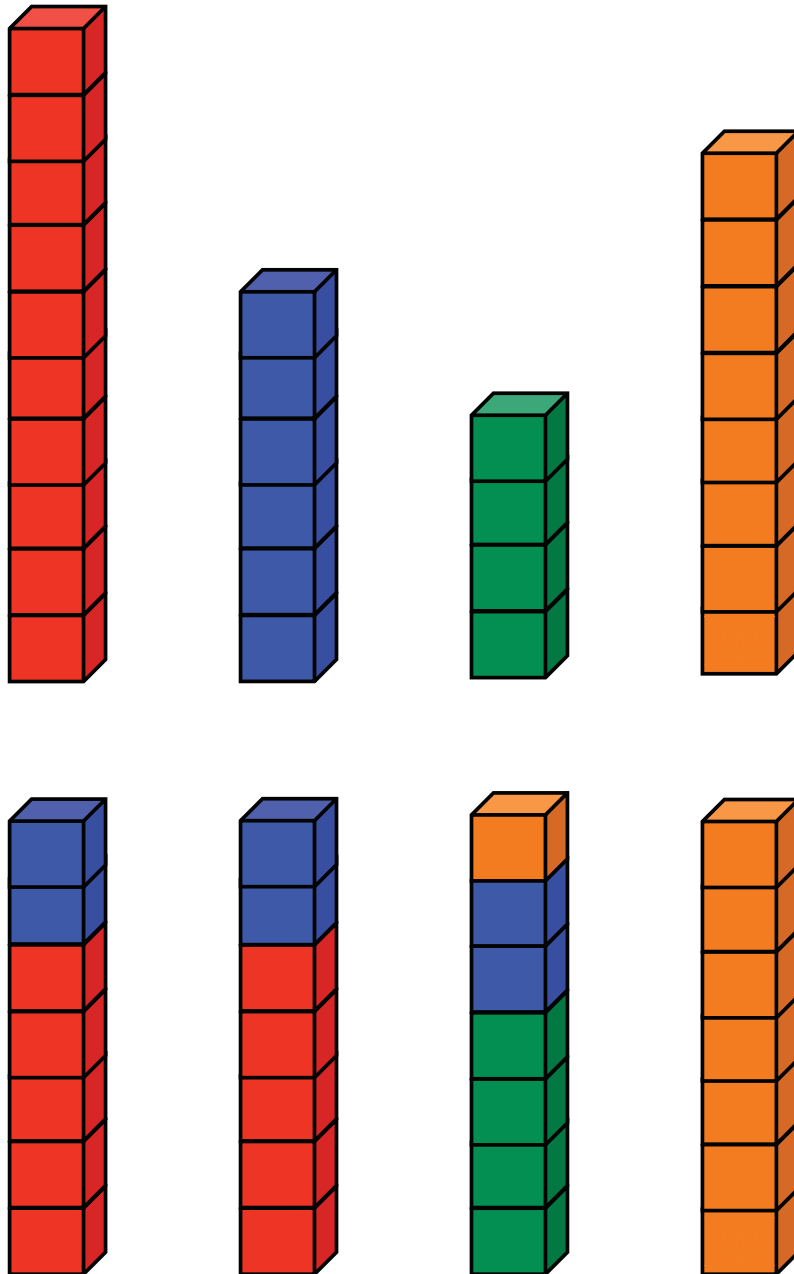
A cookie has a circumference of 10".
A candy bar has a perimeter of 10".
Can you be sure which has more area?



HOW MEASURES ARE AND ARE NOT RELATED • Grades 6–8 • CCSS 7.G

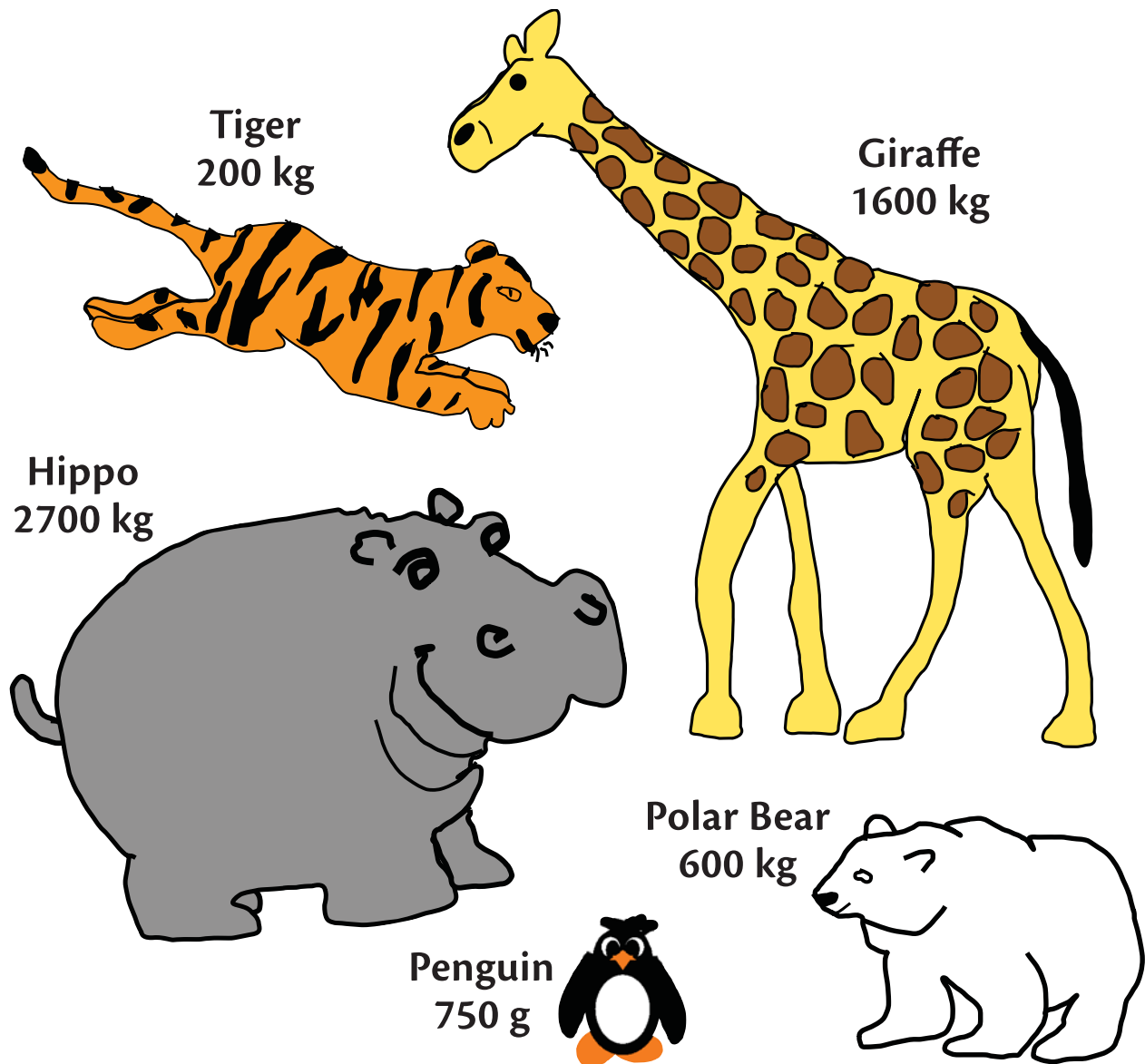
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What does this picture show?
Why might this process be useful?



MEAN • Grades 6–8 • CCSS 6.SP

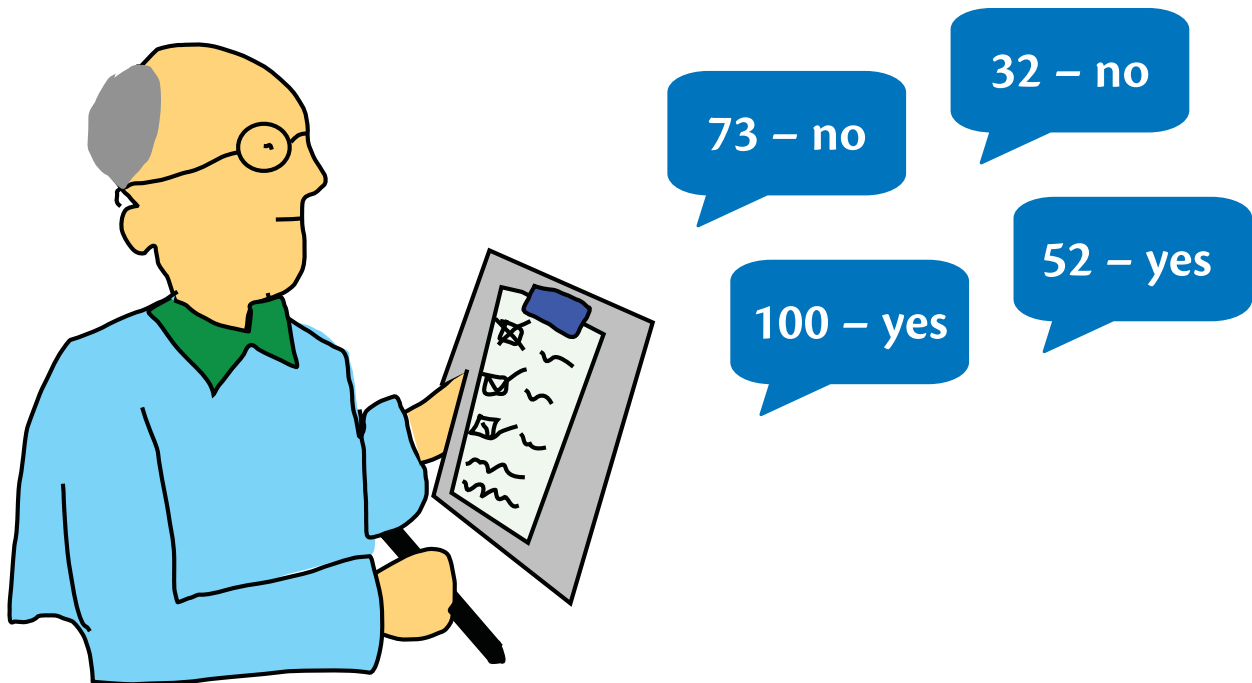
How would you describe these data about masses to someone?



VARIABILITY • Grades 6–8 • CCSS 6.SP

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What conclusion can you draw about whether most people are willing to contribute to a new community pool?



SAMPLING • Grades 6–8 • CCSS 7.SP


What probabilities might be related to randomly choosing a song from Tara's download library?

Tara's Songs



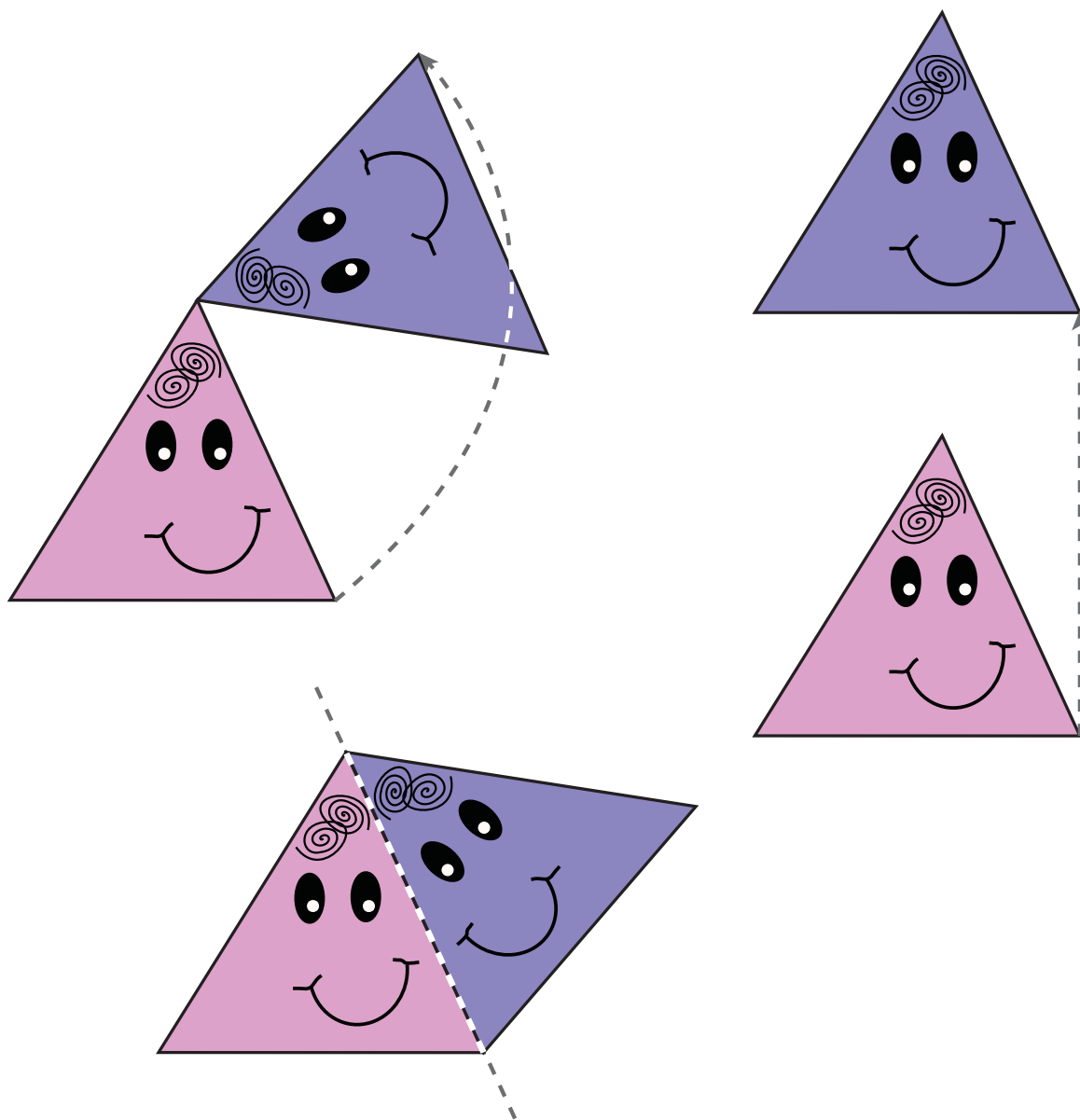
What will happen next?
How sure are you?



<i>HEADS</i>	<i>TAILS</i>
	

UNPREDICTABILITY • Grades 6–8 • CCSS 7.SP

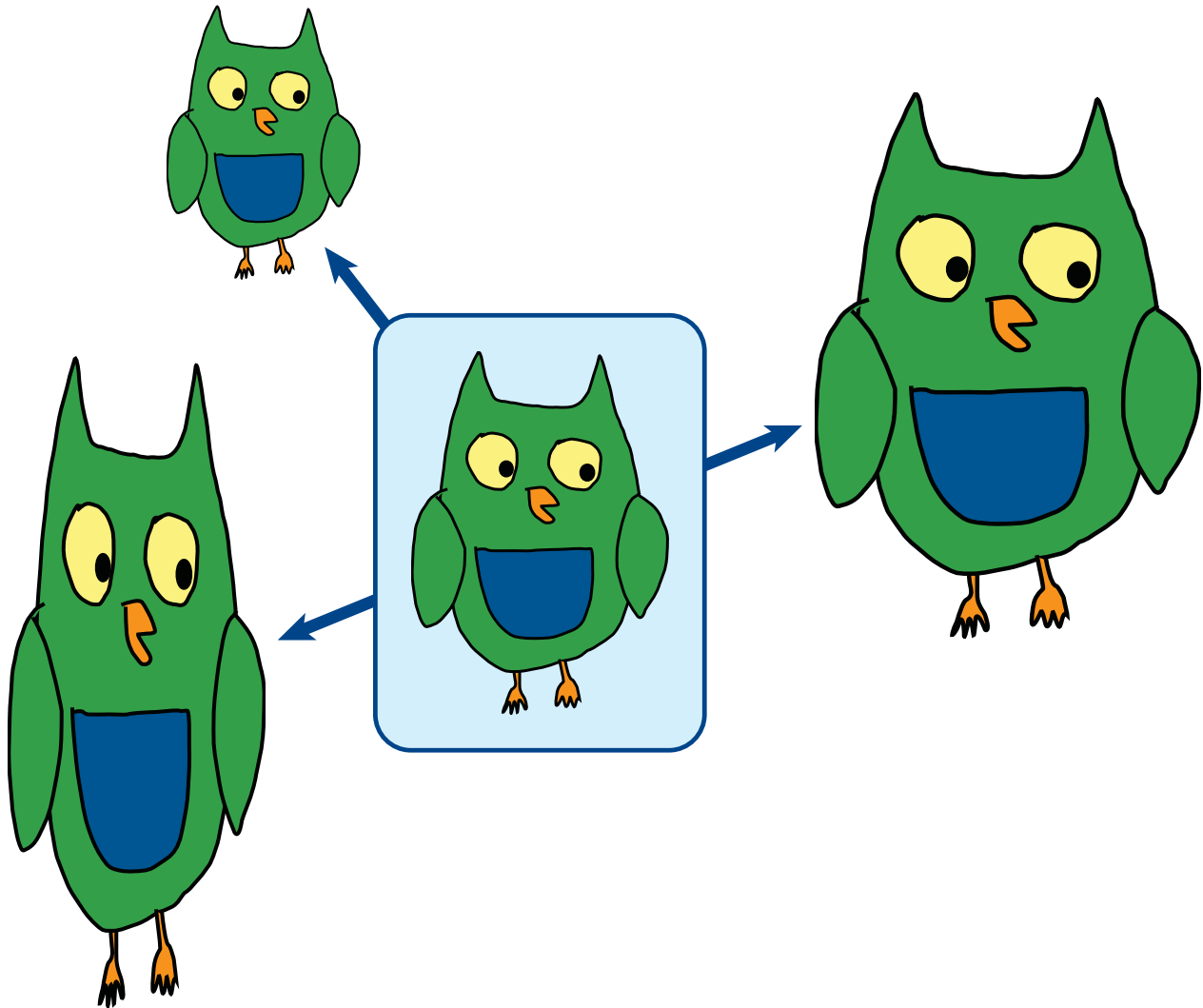
Which points on the original triangles
do not move at all?
Which move pretty far?



ROTATIONS, REFLECTIONS, AND TRANSLATIONS • Grades 6–8 • CCSS 8.G

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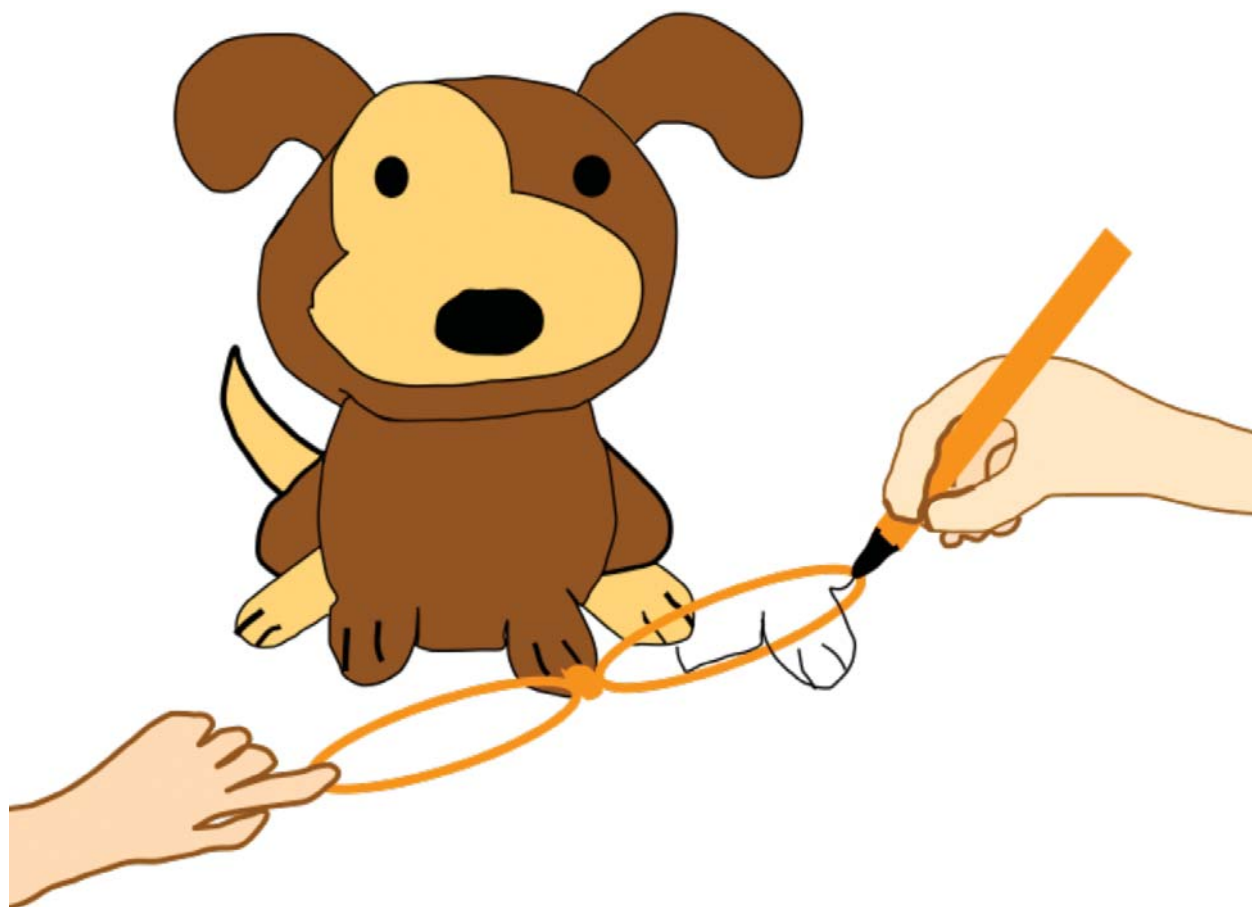
Which are scale drawings? How do you know?



SCALE DRAWINGS • Grades 6–8 • CCSS 7.G

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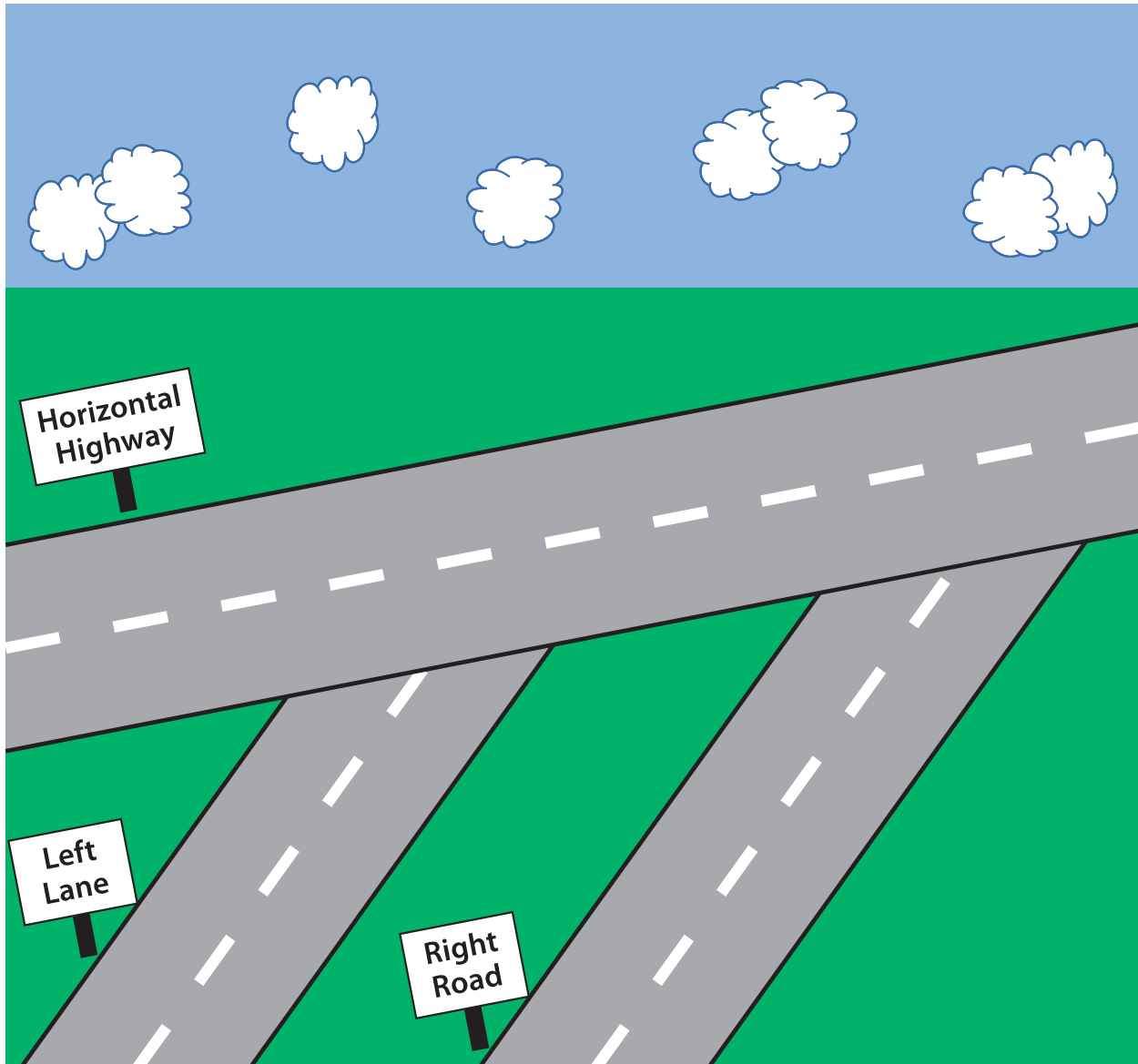
Sara is tracing the picture of the dog.
How is the dog her pencil is creating
different from the dog she is tracing?
Why?



DILATATIONS • Grades 6–8 • CCSS 8.G

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How can you be sure that Left Lane and Right Road are parallel?



ANGLES WITH PARALLEL LINES • Grades 6–8 • CCSS 8.G

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What are some different ways to represent $3x + 2$?

$x + (-x)$
is a way to represent 0

$1 + (-1)$
is a way to represent 0

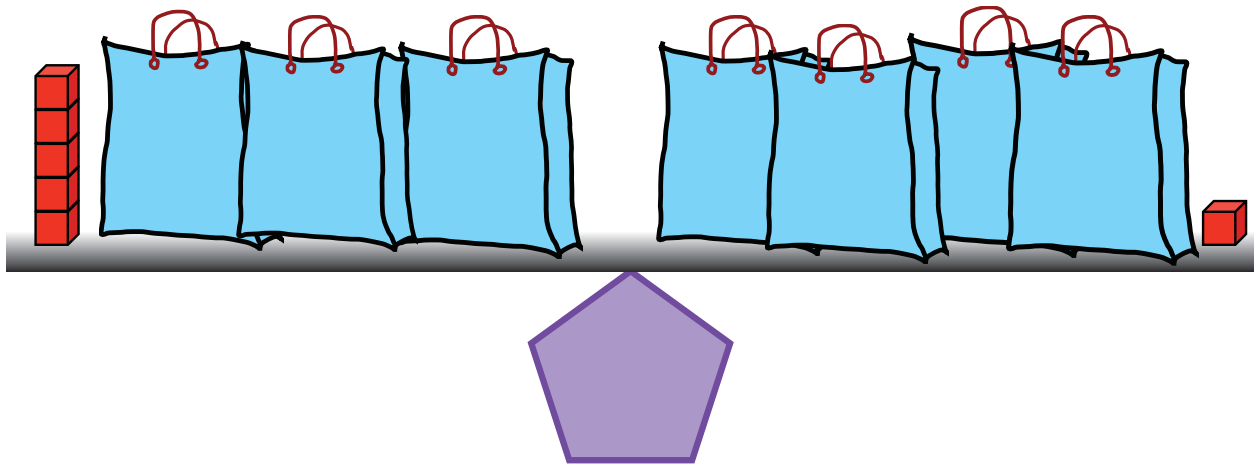


is a way to represent x



is a way to represent 1

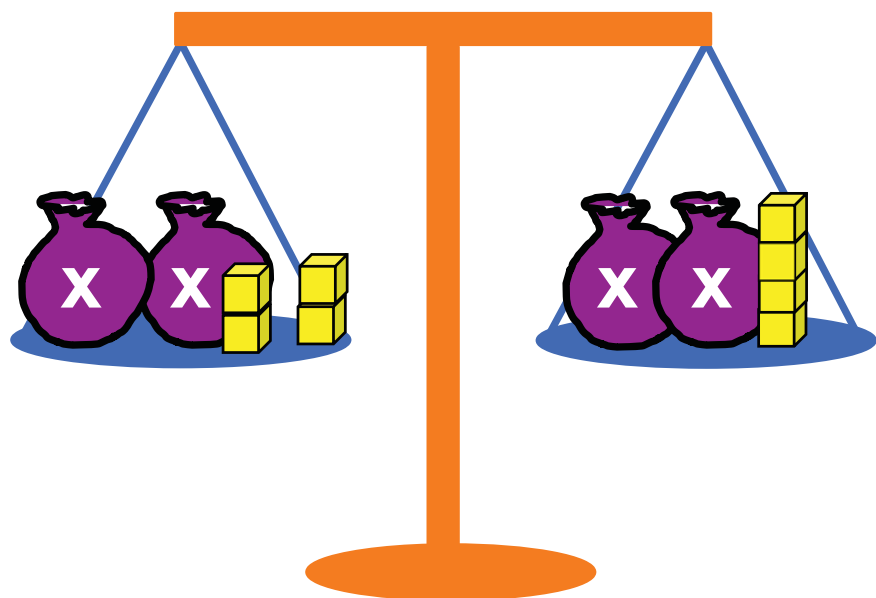
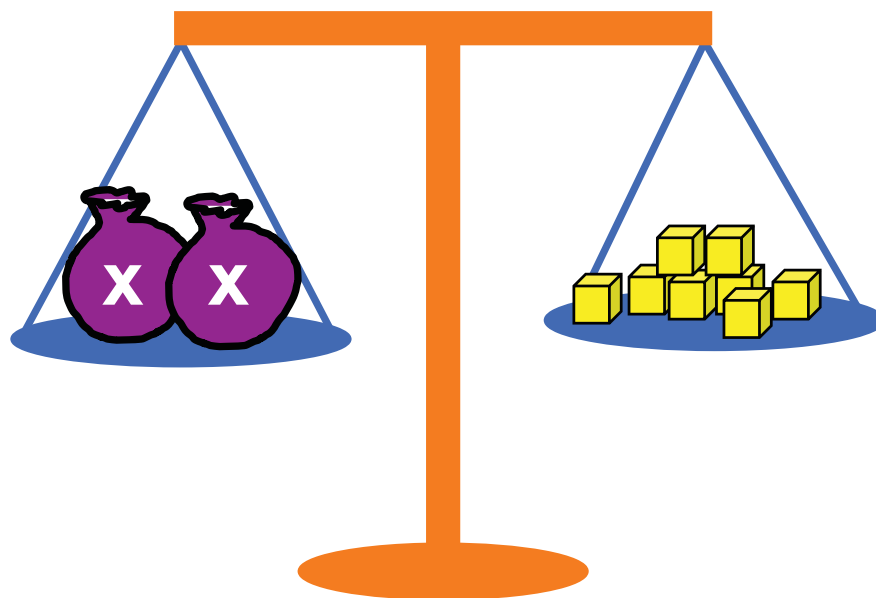
How can thinking about this balance
help you solve
the equation $3x + 5 = 4x + 1$?



EQUATION AS A BALANCE • Grades 6–8 • CCSS 6.EE

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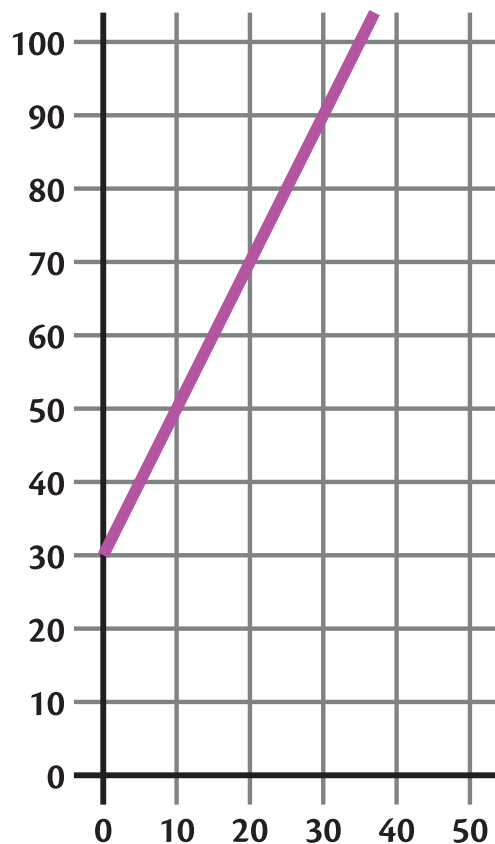
How are the equations for the two balances different?



DIFFERENT TYPES OF EQUATIONS • Grades 6–8 • CCSS 6.EE

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The graph tells how much someone might spend if he or she buys a number of \$2 plants and a \$30 planter. Where on the graph would one find the information from the three different pictures? Why is the graph a line?

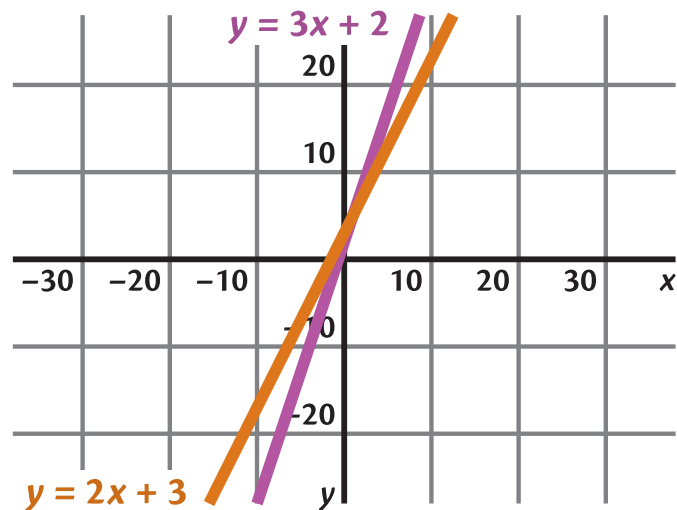


WHAT IS LINEAR? • Grades 6–8 • CCSS 7.RP, 8.EE

How do the numbers in the tables show up in each of the graphs?
 How do the numbers in each of the equations show up in the tables?

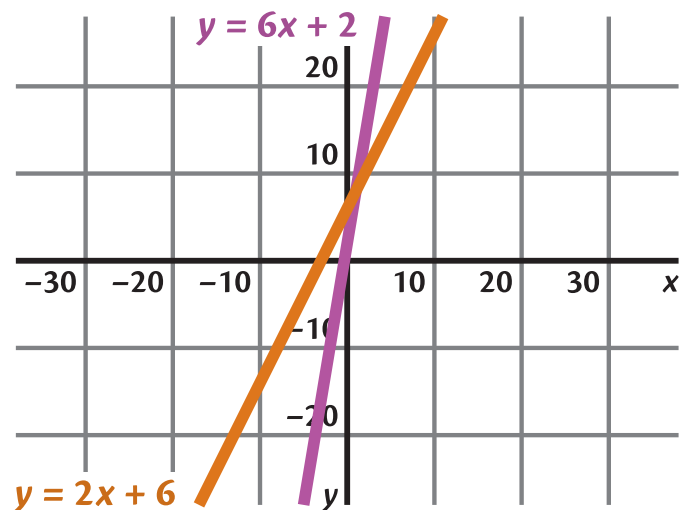
x	y
0	2
1	5
2	8
3	11
4	14

x	y
0	3
1	5
2	7
3	9
4	11



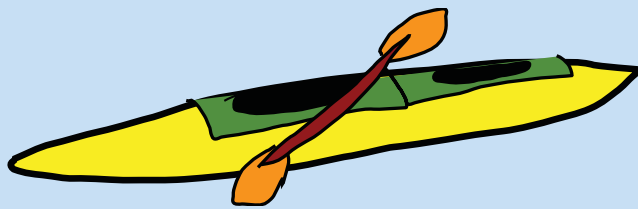
x	y
0	2
1	8
2	14
3	20
4	26

x	y
0	6
1	8
2	10
3	12
4	14



ROLE OF THE SLOPE IN THE EQUATION OF A LINE • Grades 6–8 • CCSS 8.EE

When the two different boat rentals are compared, is there a number of minutes for which they cost the same amount?



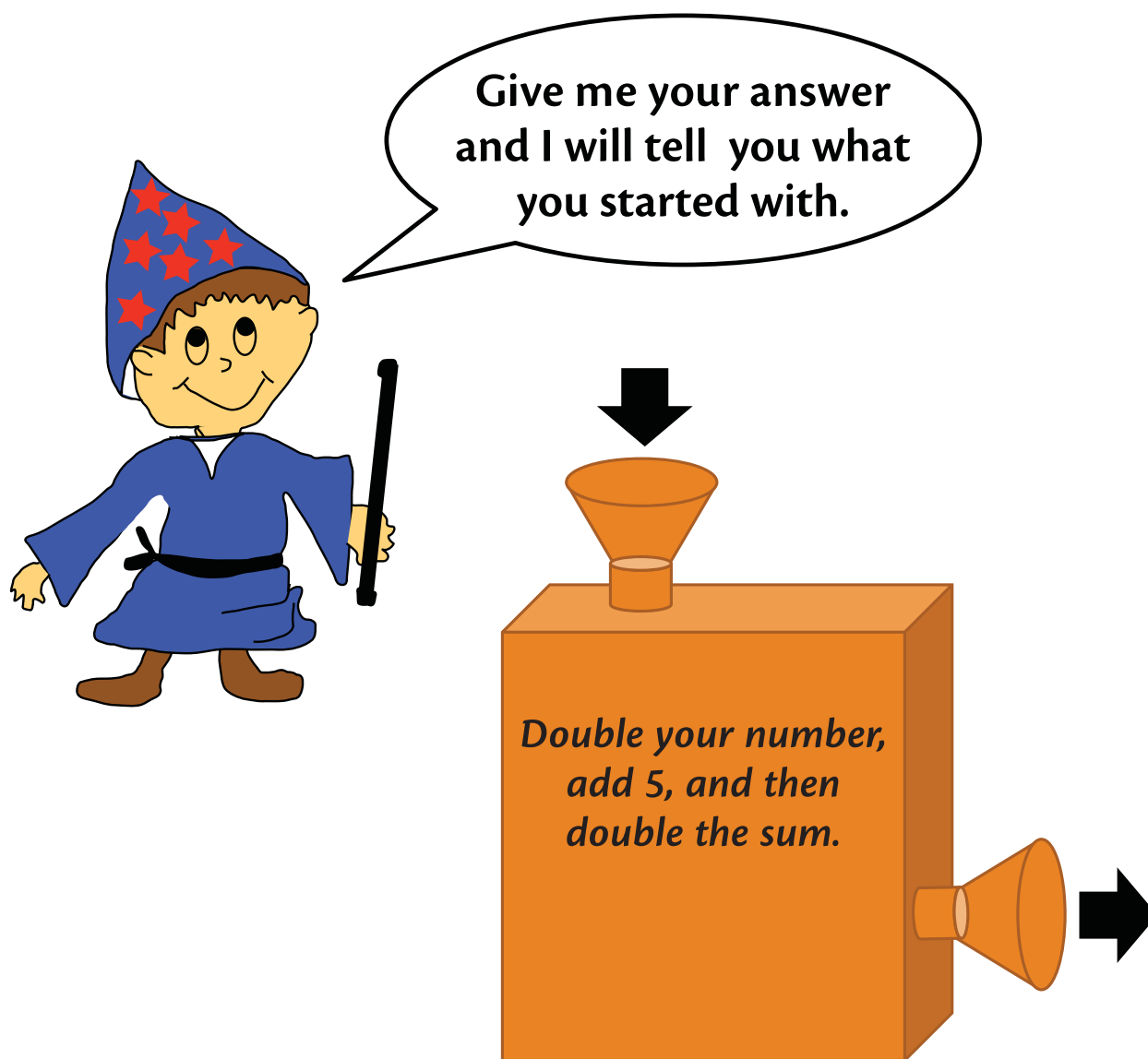
Kayak for Rent:
 $\$5 + \15 per
20 minutes



Sailboat for Rent:
 $\$15 + \10 per
40 minutes

SYSTEMS OF EQUATIONS • Grades 6–8 • CCSS 8.EE

**Do you think the wizard can do this?
Would he be able to give the start number
if the rule on the machine were different?**



FUNCTION RULES • Grades 6–8 • CCSS 8.F