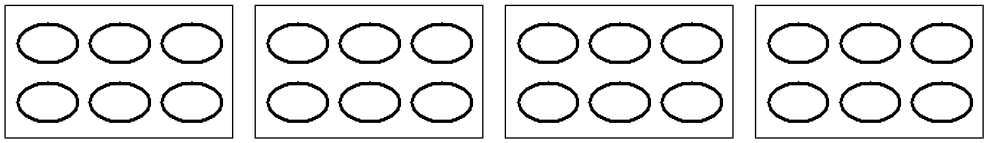
Answer fields

Name: _____ **Date:** _____

1. Paul has 4 baggies. He put 6 pieces of candy in each bag.



- How many baggies does Paul have? _____
- How many pieces of candy are in each bag? _____
- Write a multiplication sentence.

  _____ × _____ = _____

- How many pieces of candy does Paul have in all? _____

2. Write the amounts and compare them using >, <, or =.

_____ ¢ ☐ _____ ¢

3. Compare. Write <, >, or =.

9.327 ☐ 9.236

0.584 ☐ 0.58

5.2 ☐ 5.200

4.

	A	B	C	D	E
1	7	3	7	−3	7
2	6	6	4	9	4
3	8	4	3	5	7
4	2	9	6	7	7
5	1	7	2	5	9

Given the spreadsheet, show the result of each formula in the box.

`=sum(C1:C5)` ☐

`=sum(A4,E4)` ☐

`=max(A3:E3)` ☐

`=B2/C5-D4` ☐

`=count(C2:C4)` ☐

5. A random sample of adults are asked about their preferences for a first dinner date with someone. Complete the two-way table so that it has the characteristics listed.

- 122 people responded to the survey.
- 50 of the people who said they order dessert said they also prefer to split the check.
- 68 people prefer splitting the check.
- 56 people prefer to skip dessert rather than ordering one.

	order dessert	**no dessert**
split the check		
one person pays		

6. Complete the table. Each row represents a circle with a defined sector.

sector area	**radius**	**central angle**
5π cm^2	5 cm	degrees
12π cm^2	cm	270 degrees
cm^2	12 cm	15 degrees

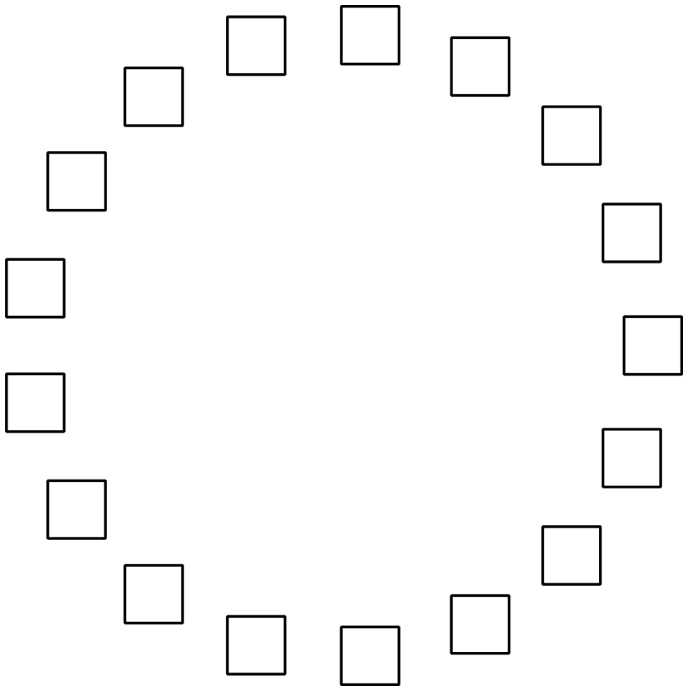
Answer fields

7. A person owes $1000 on a credit card that charges an interest rate of 2% per month.

Complete this table showing the credit card balance each month if they do not make any payments.

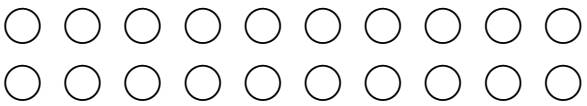
month	**total bill in dollars**
1	1,000
2	1,020
3	1,040.40
4	
5	
6	
7	
8	

8. a) How many squares are there?



There are _____ squares.

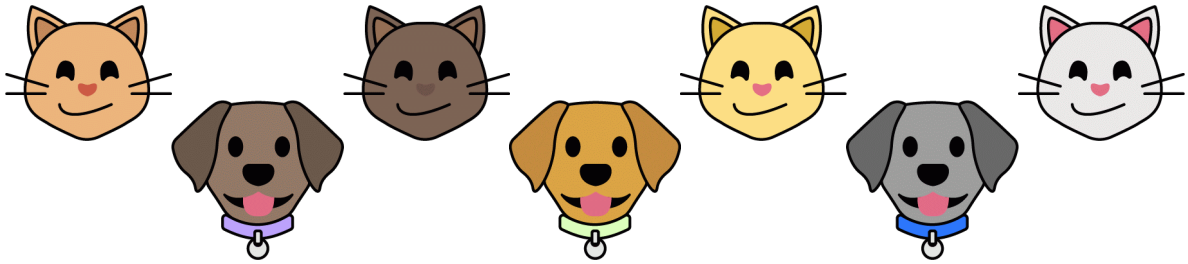
b) How many circles are there?



There are _____ circles.

Answer fields

9. Complete the sentences to describe this picture.



a) The ratio of dogs to cats is _____ to _____.

b) For every _____ dogs, there are _____ cats.

10. Complete the table so that the cost per banana remains the same.

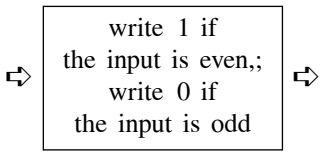
number of bananas	cost in dollars	unit price (dollars per banana)
4		0.50
6		0.50
7		0.50
10		0.50
	10.00	0.50
	16.50	0.50

11. Complete each statement.

- 20% of 60 is _____
- 25% of _____ is 6
- _____% of 100 is 14
- 50% of 90 is _____
- 10% of _____ is 7
- 30% of 70 is _____

Answer fields

12. Here is an input-output rule:



Complete the table for the input-output rule:

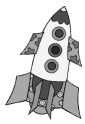
input	−4	−2	−1	0	1	2	4
output							

13. A restaurant asked a random sample of diners about their preferences for meals. Complete the two-way table so that it has the characteristics listed.

- 98 people responded to the survey.
- 40 of the diners who said they prefer chicken said they also prefer to have a salad.
- 33 diners prefer not to have a salad.
- 40 diners prefer to have fish.

	salad	**no salad**
fish		
chicken		

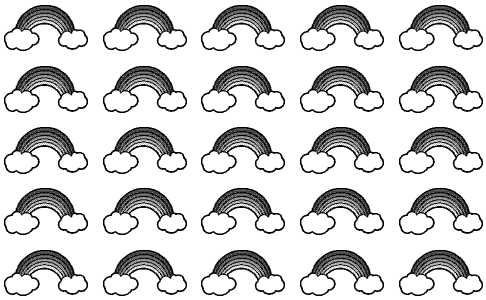
14. The chart shows the number of toys in a store.

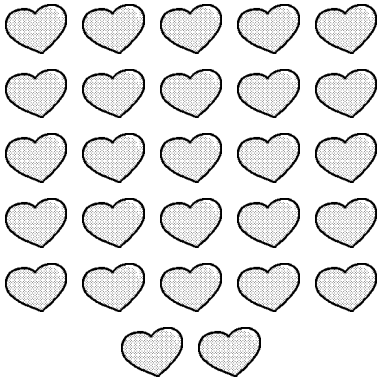
Drawing	**Name**	**Number (words)**	**Number (digits)**
	rocket	ninety-eight	
	scooter	sixteen	
	train	forty-nine	
	puppet	thirty-two	

Write the correct digits to show the number of each toy.

Answer fields

15. Leila put her stickers in groups on the desk.





Look at the  .

How many tens? _____

How many ones? _____

How many  altogether? _____

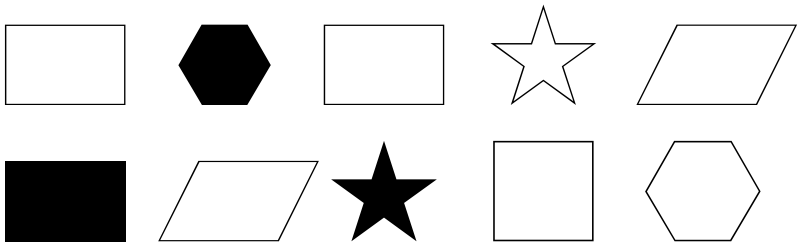
Look at the  .

How many tens? _____

How many ones? _____

How many  altogether? _____

16. Eva drew some shapes.



Write the correct fraction on the line.

____ of the shapes are white

____ of the shapes are black

____ of the shapes are polygons

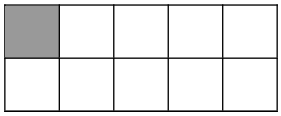
____ of the shapes are quadrilaterals

____ of the shapes are stars

Answer fields

17. Use the fraction models to decide if each sentence is true or false.

$\frac{1}{10}$



$\frac{1}{8}$

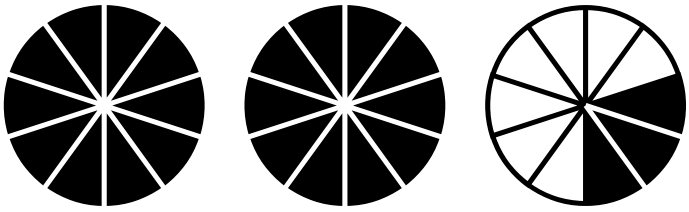
On each blank, write a T if the comparison is true or an F if the comparison is false.

___ $\frac{1}{10} > \frac{1}{8}$

___ $\frac{1}{8} > \frac{1}{10}$

___ $\frac{1}{10} = \frac{1}{8}$

18. Mrs. Ricardo baked 3 pies for a family reunion. In the figure below, the shaded part shows the pieces of pie that were eaten.



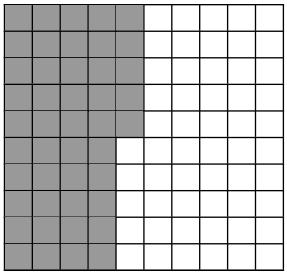
What fraction and decimal represent the amount of pie that was eaten?

Fraction _____

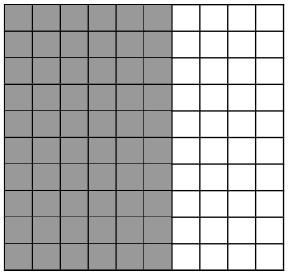
Decimal _____

Answer fields

19. Two builders are working on a nearby housing development. The shaded parts of the models represent the amount of work that has been completed by each builder.



Swenson Homes



Pinecrest Builders

For each builder, write the decimal and fractional amount of work that has been completed.

	decimal	fraction
Swenson Homes	_____	_____
Pinecrest Builders	_____	_____

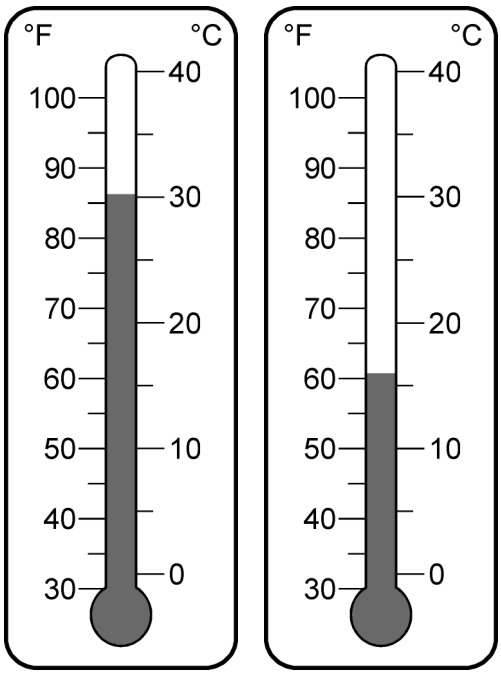
20. Fill in the blanks so that the objects on the left and right have an equal weight.

8 oz of cheese = _____ lb of yogurt

$1\frac{1}{4}$ lb of cherries = _____ oz of green grapes

8,000 lb of steel bars = _____ tons of plastic tubing

21. Look at each thermometer. For the Fahrenheit and Celsius scales, estimate the temperature *to the nearest* 5°.



____ °F ____ °F

____ °C ____ °C

22. Complete the table.

Shape	Number of Sides	Number of Corners	Number of Right Angles
			
			

23. Create a pattern by following the rule $n \times 3$, where n is the previous number.

6, ____, ____, ____, ____

24. Finish the pattern:

24, 21, 18, 15, ____, ____, ____, ____, 0

Answer fields

25. Complete the magic square if the magic sum is 3. (Each row and column of a magic square adds up to the same number.)

	−3	
		−1
−2	5	

26. Evaluate each expression for $n = 7$.

$n - 3$ _____	$n + 3$ _____
$10 - n$ _____	$10 + n$ _____

27. The table shows how many winter clothing items the third grade classes collected for a community service project.

Room	**Warm Coats**	**Pairs of Gloves**	**Warm Hats**	**Sweaters**
H-28	13	15	20	11
C-19	21	11	8	14
A-32	17	16	5	18

What room collected the most winter clothing items? _____

How many pairs of gloves collected by the classes altogether? _____

How many warm hats collected by the classes altogether? _____

Answer fields

28. Mr. Miller made 100 breakfast goods to sell in his bakery.

The table shows the kinds of breakfast goods he made.

Breakfast Goods

Cinnamon Rolls	25
Sprinkle Donuts	50
Apple Fritters	10
Glazed Donuts	15

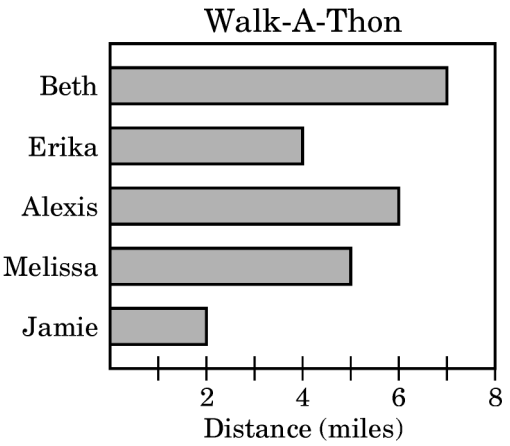
Customers bought all of the Cinnamon Rolls and the Sprinkle Donuts.

How many breakfast goods did Mr. Miller sell? ☐

Does Mr. Miller have any breakfast goods left? ☐

If yes, how many? ☐

29. The graph shows the distance walked by five teens who entered a walk-a-thon.



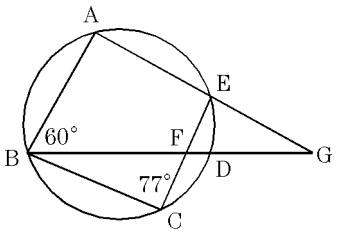
Which teen walked 5 miles? _____

Which 2 teens together walked the same distance as Alexis? _____

How many more miles did Alexis walk than Melissa? ____

Answer fields

30. Given the diagram shown, find the measure of each of the following.

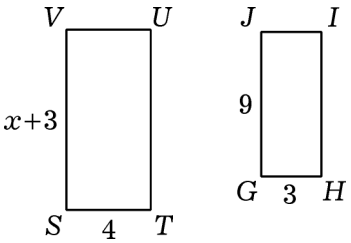


a) $\angle AED =$ _____ °

b) $\angle BDE =$ _____ °

c) $\angle DGE =$ _____ °

31. Rectangles *STUV* and *GHIJ* are similar. Rectangle *STUV* represents Renee's original photo and rectangle *GHIJ* represents the re-sized photo. The units of all dimensions are inches.



a) Find the length of side *VS* in the original photo. ☐ inches

b) What scale factor produced the re-sized photo? ☐

c) Renee decides she does not like the smaller photo and wants to enlarge it to its original size. What scale factor should she use? ☐

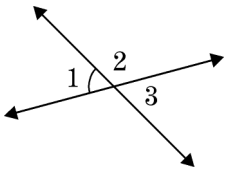
32. Let A and B be independent events with $P(A) = 0.6$ and $P(B) = 0.5$.

a) Find $P(A \cap B)$. ☐

b) Find $P(A \cup B)$. ☐

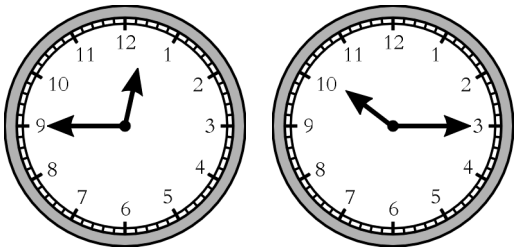
Answer fields

33. The table below shows possible measures for $\angle 1$ in the diagram. For each measure, write the matching measures for $\angle 2$ and $\angle 3$.



$m\angle 1$	$m\angle 2$	$m\angle 3$
40°	____ °	____ °
50°	____ °	____ °
71°	____ °	____ °

34. Look at the clocks below. Write the correct time in the box below each clock.



35. The table shows three decimals. Round each of these decimals to the nearest hundredth and tenth. Write the correct number in each empty box.

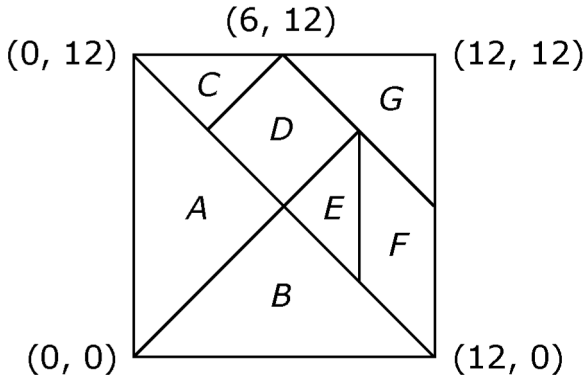
Number	Nearest Hundredth	Nearest Tenth
1.536		
1.531		
1.587		

Answer fields

36. In the table below, write the correct number next to each set of tally marks.

	𝍸 𝍸 𝍸 ||
	𝍸 𝍸
	𝍸 𝍸 𝍸 𝍸 ||||
	𝍸 𝍸 ||
	𝍸 |||

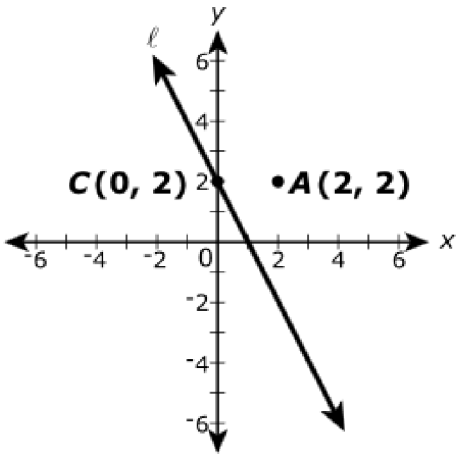
37.



A set of tangrams consists of seven pieces that form a large square, as shown above. The pieces labeled *A*, *B*, *C*, *E*, and *G* are isosceles right triangles, *D* is a square, and *F* is a parallelogram. The coordinates of the corners of the big square and the coordinates of the point where pieces *C*, *D*, and *G* meet are given. Complete the following table.

Pieces	Perimeter	Area
Big Square		
A		
B		
C		

38. In the xy-coordinate plane shown, line ℓ passes through point C and has a slope of -2.



Write your answer in the spaces below.

A dilation of line ℓ with center A and a scale factor of 3 will produce a new line through point C', the image of point C, with coordinates (_____,_____) and with a slope of _____.

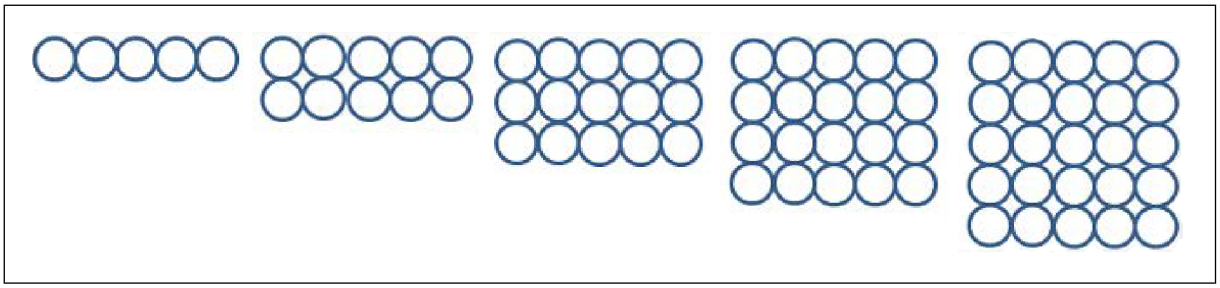
39. Multiply the polynomials $(x + 3)(2x - 4)$. What is the product in the form $ax^2 + bx + c$?

a = _____

b = _____

c = _____

40. The first five terms of a shape pattern are shown here.

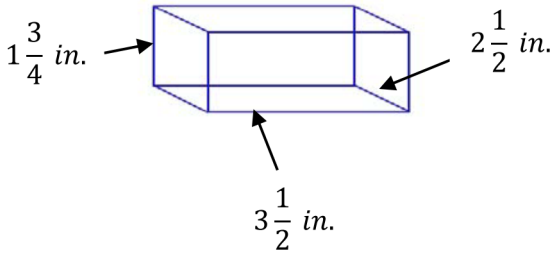


Write a number on each line below that makes each statement true.

a) The rule for the pattern is that the number of circles increases by _____.

b) The total number of circles in the 6^{th} term would be _____.

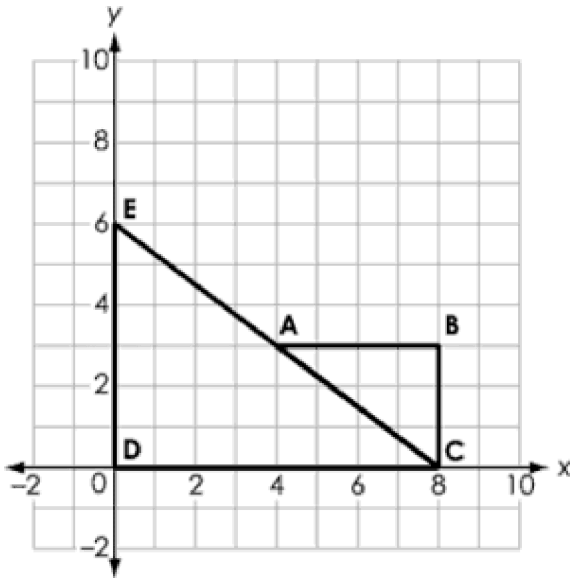
41. Mark purchased a box to store $\frac{1}{4}$-inch cubes. The box has the following dimensions:



Write the correct answer to complete each sentence below.

- The volume of the box is _____ cubic inches.
- The box can be filled with _____-inch cubes.

42. Two triangles are shown on a coordinate grid.



Katie shows the two triangles are similar by performing the following transformations:

- First, she rotates $\triangle ABC$ 180° about point A.
- Then she dilates $\triangle A'B'C'$ by a factor of k with a center of dilation at point A.
- Finally, she translates $\triangle A''B''C''$ p units to the right and q units down to map onto $\triangle CDE$.

What are the values of k, p, and q?

$k =$ ☐

$p =$ ☐

$q =$ ☐

Answer fields

43.

Ingredients	
Eggs	4
Flour	8 cups
Milk	$\frac{1}{2}$ cup

The above ingredients are used to make a recipe for 6 people. Sam wants to make this recipe for only 3 people.

Complete the table below to show what Sam needs to make the recipe for 3 people. The number of eggs he needs is shown.

Ingredients	
Eggs	2
Flour	_____ cups
Milk	_____ cup

Answer fields