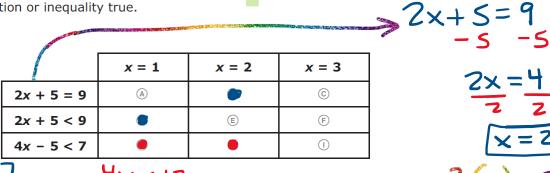
1. Which expression is equivalent to $\frac{4(6x + 11)}{2}$?

Use Distributive Property

- (A) 68
- (B) 68*x*
- 24x + 11
- 24x + 44

(1.6x)+	(4.11)
	24x+	44	

2. Fill in the bubbles to select the value or values of x that make each equation or inequality true.



$$\frac{7}{2} = \frac{7}{2}$$

$$(2) + 5 = 6$$

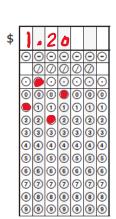
- - **3.** Chicago has a temperature of -10 degrees Fahrenheit (°F). It is colder in Minneapolis than in Chicago.

Select all the values that could represent the temperature of Minneapolis.

- (A) 12°F
- B 8°F
- -8°F
- -12°F
- -20°F

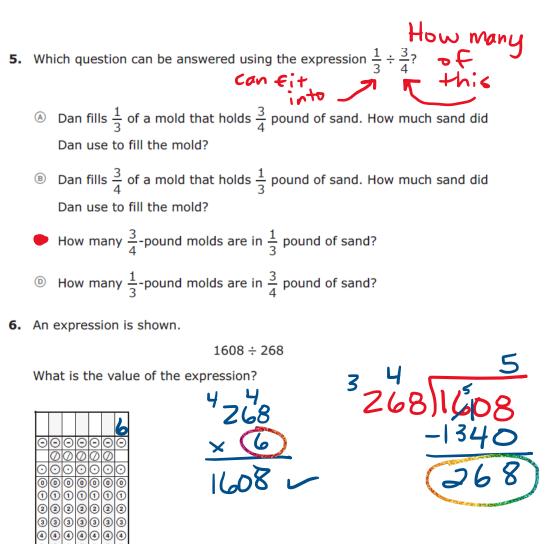
- Chicago 10 COLDER Than -10°
- 4. Dominic is buying candy by the pound for a party. For every 10 pounds of candy he buys, he pays \$12.

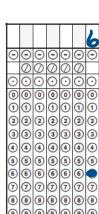
What is the cost, per pound, for the candy?



"per pound" Means "how much for one?"

* 12 _	\$?
10	1 pound





7. Nora's fruit stand sold 12 fewer pineapples than bananas last week. The stand sold 48 bananas last week. 48-12 = (36) pineaples Complete the sentences to determine and interpret the ratio of bananas

sold to pineapples sold. For each ox, fill in the bubble before the ratio or number(s) that is correct

Last week, the ratio of bananas sold to pineapples sold was

A 1:4 B 3:4 © 4:1 4:3

B 3 This ratio means that for every banana(s) sold, ^D 5

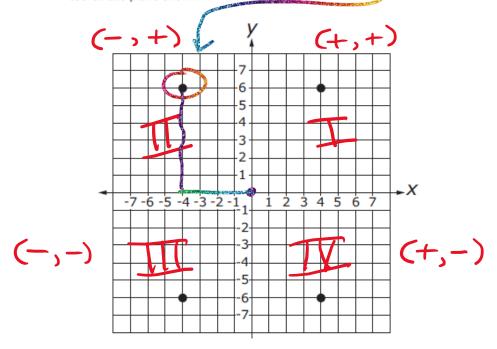
the number of pineapples sold was

8. Amir collected data from his sixth-grade class at Liberty Middle School.

Which question could Amir ask as a statistical question?

More than one answer

- What time do classes start at Liberty Middle School?
- What is the typical favorite subject in sixth grade?
- © How many students were in sixth grade at the start of this year?
- How many subjects are there in sixth grade?
- 9. Which ordered pair best describes the point plotted in Quadrant II on the coordinate plane shown?



- A (-4, 6)
 - ® (6, 4)
 - © (4, -6)
 - ® (6, -4) (X, y)

10. This question has two parts.

Syrilla sells homemade scarves for \$4 each.

Part A. Which equation could be used to find the number of scarves, x, Syrilla needs to sell in order to earn \$200?

(A)
$$\frac{X}{4} = 200$$

- 4x = 200
- © x + 4 = 200
- x 4 = 200

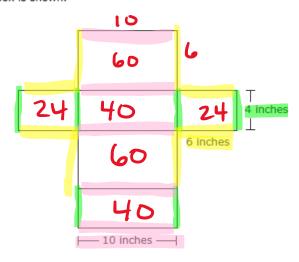
Part B. Complete the sentence by selecting the correct number. For the blank, fill in the bubble **before** the number that is correct.

50 4 200

Syrilla needs to sell ______ [• 50 ® 196 © 204 © 800] scarves

in order to earn \$200.

Carl is shipping a cardboard box that is a rectangular prism. The net of Carl's box is shown.



12. The cost per bushel of corn at Farm A is constant. The graph shows the total cost, C, in dollars, of purchasing different numbers of bushels of corn, b, at a farm.

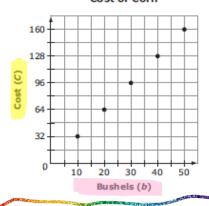
What is the area of cardboard, in square inches, required for Carl's box?

246	60
0000000	40.
00000	70.
0000000	60
■ 333333	11-
3333333 0 0 0 0 0 0	40 .
0000000	24
0000000	
	+24
	248

In the table below, fill in the bubbles to select the phrase that represents the independent variable, the phrase that represents the dependent variable, and the equation that represents the graph.

Independent Variable	Dependent Variable	Equation
Cost per bushel of com	© cost per bushel of corn	① b = 3.2C
number of bushels of com	number of bushels of corn	C = 3.2b
© total cost for bushels of com	total cost for bushels of corn	\otimes <i>b</i> = <i>C</i> + 3.2
bushels of com per dollar	bushels of corn per dollar	$\bigcirc C = b + 3.2$

Cost of Corn



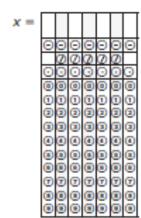
13. What is the value of (5)3?

Θ	Θ	Θ	Θ	Θ	Θ	Θ
	Ø	Ø	0	Ø	Ø	
0	0	0	Θ	0	0	0
0	0	0	0	0	0	0
1	O	1	O)	O	1	1
3	3	3	3	3	3	3
3	3	3	3	3	3	3
(4)	0	(1)	➂	0	(1)	➂
(1)	®	®	◉	®	®	®
(0)	®	(1)	◉	®	(B)	®
T	T	T	T	T	T	T
®	®	•	®	®	(8)	•
◉	(1)	•	(8)	(1)	•	•

14. A square has a perimeter of 36 units.

One vertex of the square is located at (3, 5) on the coordinate grid.

What could be the x- and y-coordinates of another vertex of the square?



y =							
	Θ	Θ	Θ	Θ	Θ	Θ	Θ
		Ø	0	Ø	Ø	Ø	
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	1	1	1	1	O	1	O
	3	3	3	3	3	3	3
	3	3	3	3	3	3	3
	(1)	(1)	(1)	①	0	(1)	0
	®	®	®	◉	®	®	®
	(8)	(0)	(0)	◉	®	(0)	•
	T	T	T	T	T	T	T
	(B)	(B)	(B)	(B)	(B)	(B)	(B)

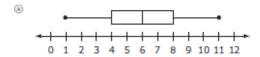
@|@|@|@|@|@

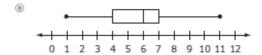
15. Fill in the bubbles to match the equivalent expressions.

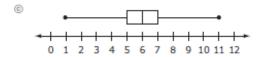
	4(10+9)	9(5+2)	3(12+7)
36 + 21	(A)	(8)	©
45 + 18	(1)	(E)	P
40 + 36	0	Э	0

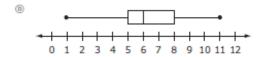
16. A class survey provides the data shown.

Which box plot represents the class?









17. Select all the statements that describe the expression 5 + 2x.

- A The expression represents 5 plus 2 plus x.
- The expression represents 5 plus 2 times x.
- © The expression represents 5 plus x plus x.
- The expression represents 5 plus x times x.
- © The expression represents the sum of 5 and 2x.
- The expression represents the product of 5 and 2x.
- **18.** Tina sells lampshades for \$7 each and paper lanterns for \$4 each at a one-day craft fair. She sells k lampshades and (k+4) paper lanterns. The expression 7k+4(k+4) represents Tina's total sales.

Select all the equivalent expressions for Tina's total sales at the fair.

- 8k + 16
- ® 11k + 4
- @ 11k + 16
- ® 7k + 4k + 4
- © 7k + 4k + 16

What is the value of the expression?

Θ	Θ	Θ	Θ	Θ	Θ	Θ
	Ø	Ø	Ø	Ø	Ø	
Θ	Θ	0	0	0	0	Θ
0	0	0	0	0	0	0
O	O	1	O	O	0	O
3	3		3	3	3	3
3	3	3	3	3	3	3
◉	◉	(1)	◉	◉	(◉
0	0	◉	◉	®	0	0
0	0	(0)	•	0	0	0
Ð	T	T	Ŧ	Ŧ	T	T
•	®	(8)	®	®	(8)	0
•	•	(1)	•	•	(1)	0

(A)

20. Which of the following situations can be represented by this expression? 50(b + 3b)

b is equal to	Situation
ach friend received	Alexi had some blocks. She gave 50 blocks to Manuel and divided the rest evenly among her 3 friends.

-		
(B)	b is equal to	Situation
	each set	Alexi had 50 blocks. Manuel gave her 1 set of blocks, and she bought 3 more sets of blocks.

©	b is equal to	Situation		
		Manuel and Alexi bought some blocks. Manuel bought 50 sets of blocks. Alexi		
		bought 4 times as many sets as Manuel.		

(D)	b is equal to	Situation
		Manuel and Alexi bought sets of 50 blocks. Alexi bought 3 times as many sets as Manuel.

21. In a circle, which ratio is equivalent to π?

- A radius to area
- ® diameter to radius
- @ area to circumference
- © circumference to diameter

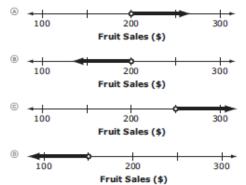
This question has two parts.

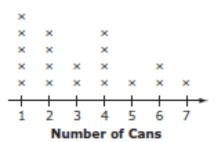
Jayesh determines that he needs to sell more than \$200 worth of fruit at his produce stand in order to make a profit.

Part A. Which inequality represents the fruit sales, s, in dollars, for which Jayesh will make a profit?



Part B. Which number line models all fruit sales, in dollars (\$), for which Jayesh will make a profit?

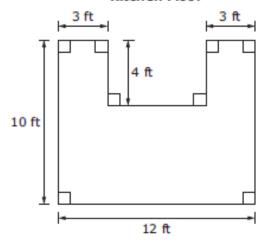




-	_	_	_	_	_	_
Θ	Θ	Θ	Θ	Θ	Θ	Θ
	0	Ø	0	8	Ø	
0	0	0	Θ	0	0	0
0	0	0	0	0	0	0
1	O	1	1	O	1	1
3	3	3	3	3	3	3
3	3	3	3	3	3	3
(1)	➂	(1)	①	➂	(1)	➂
(1)	◉	0	◉	◉	(1)	®
(0)	◉	0	⊚	◉	(1)	®
T	T	T	T	T	T	T
(8)	(8)	(1)	(8)	(8)	(8)	(8)
◉	•	(1)	•	◉	(1)	•

24. Mr. Hilton is buying new tile for his kitchen floor. The dimensions, in feet (ft), of the kitchen floor are shown.





What is the area, in square feet, of Mr. Hilton's kitchen floor?

		_	_	_	_	_
Θ	Θ	Θ	Θ	Θ	Θ	Θ
	Ø	0	9	Ø	Ø	
0	0	0	0	0	0	0
0	⊚	0	⊚	⊚	0	0
①	O	0	O	O	0	O
3	3	3	3	3	3	3
3	3	➂	➂	3	3	3
➂	➂	(1)	➂	➂	(1)	◑
◉	◉	(1)	◉	◉	0	◉
◉	◉	0	◉	◉	0	◉
Ŧ	T	Ŧ	T	T	Ŧ	Ŧ
◉	®	(8)	®	•	(8)	•
◉	•	•	•	•	(1)	•
	_			_		

25. Linda recorded the number of minutes she practiced playing her violin for 10 days. The table shown represents the data she collected.

Day	Minutes Practiced
1	20
2	30
3	40
4	38
5	25
6	22
7	39
8	22
9	26
10	31

A. According to the data, what is the average amount of time Linda spent practicing per day?

							minutes
Θ	Θ	Θ	Θ	Θ	Θ	Θ	
	9	Ø	Ø	Ø	Ø		
0	Θ	0	0	0	0	0	
0	0	0	0	0	0	0	
1	O	O	1	1	O	1	
3	3	3	3	3	3	3	
3	3	3	3	3	3	3	
(1)	③	①	(1)	(1)	(1)	(3)	
	◉	ø			Ō		
®	◉	◉	®	◉	(8)	®	
(7)	T	T	T	Ŧ	T	(T)	
(8)	(8)	(8)	(8)	(8)	(8)	(8)	
(1)	(1)	•	(1)	•	(1)	(1)	

B. What is Linda's variation among all 10 days?

П							minutes
Θ	Θ	Θ	Θ	Θ	Θ	Θ	
П	Ø	Ø	Ø	Ø	Ø	П	
0	0	0	0	0	0	0	
0	0	0	0	0	0	0	
1	1	O	1	(D	O	1	
3	3	3	3	3	3	3	
3	3	3	3	3	3	3	
(4)	0	0	(1)	0	0	(1)	
(1)	(8)	(8)	(1)	(8)	(8)	(1)	
(1)	◉	◉	◉	◉	◉	◉	
①	T	T	T	T	T	Ŧ	
(8)	(8)	◉	(8)	(8)	◉	(8)	
(1)	•	•	(1)	◉	•	(1)	

26. Chicago, Illinois, has an elevation of 600 feet above sea level. The elevation of Desert Shores, California, is 800 feet less than the elevation of Chicago.

Select all options that apply to Desert Shores.

- elevation of -200 feet
- ® elevation of 200 feet
- below sea level
- at sea level
- ® above sea level
- 27. Alex has 64 cubes, with dimensions in feet (ft), like the one shown.



He uses all the cubes to fill a box shaped like a larger rectangular prism. There are no gaps between the cubes.

- A. What is the volume, in cubic feet, of the larger rectangular prism?
- B. What is a possible set of dimensions, in feet, of the larger rectangular prism?

Length =							
	Θ	Θ	Θ	Θ	Θ	Θ	Θ
		Ø	Ø	9	Ø	Ø	
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	1	O	1	①	O	1	◑
	3	3	3	3	3	3	3
	3	3	3	3	3	3	3
	(1)	➂	(3)	①	0	0	①
	(1)	◉	◉	◉	◉	(1)	◉
	®	◉	(B)	◉	0	(0)	◉
	T	T	T	T	T	T	T
	(8)	(8)	®	®	®	(8)	®
	◉	◉	®	◉	•	(1)	◉

Width =	Г	Г	Г				
	Θ	Θ	Θ	Θ	Θ	Θ	Θ
		Ø	Ø	Ø	Ø	Ø	
	0	0	9	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	(2)	3	3	3	3	3	3
	1	3	3	3	3	3	➂
	9	0	0	9	0	0	9
	8	9	۳	9	0	0	9
	E	0	9	9	0	0	9
	8	9	9	9	9	9	9
	K	8	ä	ĕ	8	8	ĕ

Height =							
	Θ	Θ	Θ	Θ	Θ	Θ	Θ
		Ø	Ø	Ø	Ø	Ø	
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	1	O	1	1	O	1	1
	3	3	3	3	3	3	3
	3	3	3	3	3	3	3
	(3)	0	(1)	①	0	(1)	①
	(8)	(8)	(1)	(8)	(8)	(1)	(8)
	(1)	0		®	۱	(B)	(8)
	T	T	T	T	T	T	Ŧ
	®	(8)	®	®	®	®	®
	۱	(1)	(1)	(1)	۱	(1)	(1)

Volume =

28. Tim drives the Grand Avenue bus route. He records the total number of passengers each week for 4 weeks.

The mean and mean absolute deviation of the data are shown.

- Mean: 17,123
- . Mean absolute deviation: 611

Select all the possible numbers of riders for week 5 that are within the mean absolute deviation.

- A 16,297
- ® 16,809
- © 17,724
- ® 17,956
- E 18,013

29. The points (4, -6) and (9, -6) represent the location of two towns on a coordinate grid, where one unit is equal to one mile.

What is the distance, in miles, between the two towns?

Θ	Θ	Θ	Θ	Θ	Θ	Œ
	Ø	Ø	Ø	Ø	Ø	
0	0	0	0	0	0	Œ
0	0	0	0	0	0	0
1	1	1	o	O	1	Œ
3	3	3	3	3	3	3
3	3	3	3	3	3	3
(3)	0	0	①	0	0	0
(8)	®	®	◉	®	(1)	0
◉	◉	◉	◉	◉	0	0
T	T	T	T	T	T	T
◉	◉	(8)	◉	®	(8)	8
◉	•	(1)	◉	•	(1)	0