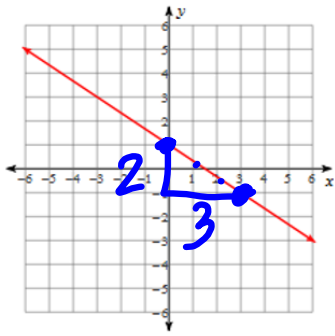


Monday, May 22

1. Which function has the same slope as the graph below?



~~A) $y = \frac{2}{3}x + 1$~~

~~B) $y = -1 + \frac{2}{3}x$~~

C) $y = 3 - \frac{3}{2}x$

D) $y = -1 - \frac{2}{3}x$

2. If J(9, -3) rotates to J'(3, 9) and K(1, 4) rotates to K'(-4, 1), how many degrees and in which direction did the points rotate?

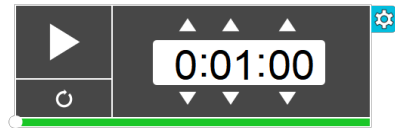
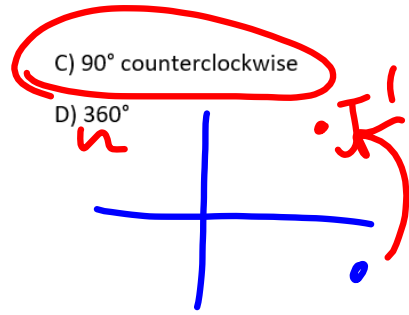
A) 180°

B) 90° clockwise

C) 90° counterclockwise

D) 360°

J(9, -3)
J'(3, 9)

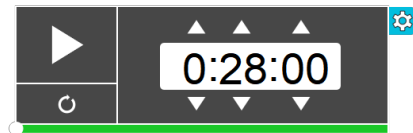


EOG Tutorial

[click here](#)

EOG Prep Quiz 1

Need scrap paper - number questions, you will want this when we check our work



Question 1

5 pts

Calculator active.

Which choice is true for $10k - 16 = 5(2k + 4)$?

- A. $k = -1$
- B. $k = 1$
- C. There is no solution.
- D. There are infinite solutions.

$$\begin{array}{l} 10k - 16 \neq 5(2k + 4) \\ \cancel{10k} - 16 \neq \cancel{10k} + 20 \\ -16 \neq 20 \end{array}$$

Question 2

5 pts



2015

The table below displays the number of DVDs sold and rented at a store for 5 weeks.

Week	DVDs Sold	DVDs Rented
1	25	50
2	45	79
3	40	70
4	22	48
5	5	28

Handwritten notes: A vertical line is drawn next to the 'Week' column. A blue circle is drawn around the 'DVDs Sold' column. To the right of the table, there are two vertical columns of numbers: '5, 22, 25, 40, 45' and '28, 48, 50, 70, 79'. Blue arrows point upwards from the bottom of each column.

Which describes the association between the number of DVDs sold and the number of DVDs rented?

- A no association
- B weak association
- C negative association
- D positive association

Handwritten mark: A blue circle around the letter 'D'.

Question 3

5 pts

A system of equations is shown.

$$\begin{aligned}
 y &= \frac{1}{2}x + 1 \\
 y &= \frac{1}{2}x - 1
 \end{aligned}$$

Handwritten notes: Blue circles are drawn around the $\frac{1}{2}x$ terms in both equations. Blue lines are drawn under the constant terms, 1 and -1.

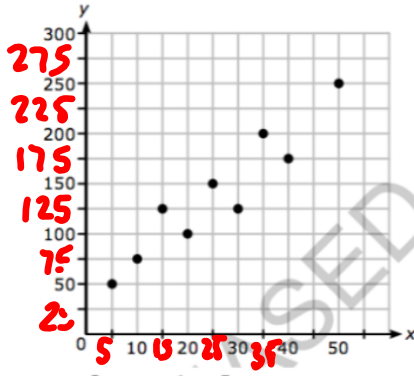
What is the solution to the system?

- A. (-1, 1)
- B. (0, -1)
- C. no solution
- D. infinite solutions



2019

Which equation **best** models the data shown in the scatterplot below?



5, 50
10, 75
15, 125
20, 100
25, 150
30, 125
35, 200
40, 175
50, 250

- A $y = 3x + 10$ C $y = 4x + 5$
 B $y = 3x + 60$ D $y = 4x + 35$

Question 5

5 pts



2015

The table shows the air temperatures at different elevations.

Elevation (feet)	Temperature (°F)
0	75°
100	70°
200	67°
300	64°
400	59°
500	55°
600	50°

Which line **best** fits this set of data?

- A $y = -\frac{1}{25}x + 75$ C $y = \frac{1}{25}x + 75$
 B $y = \frac{1}{25}x + 75$ D $y = -\frac{1}{25}x + 75$

Question 6

5 pts



2019

Which choice is an irrational number?

~~X~~

~~$\frac{4}{7}$~~

C

$\sqrt{18}$

~~X~~

~~$\sqrt{6}$~~

D

21.989

$\sqrt{36}$

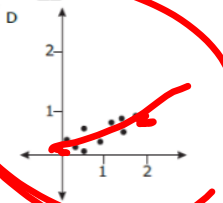
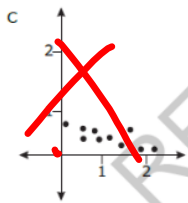
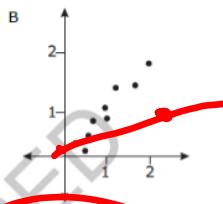
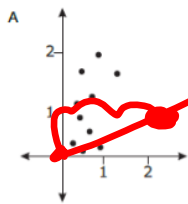
6

$21 \frac{989}{1000}$



2015

James is fitting the linear equation $y = \frac{1}{2}x$ to a data set. Which scatterplot shows the data set that the linear equation would fit *best*?



$y = \frac{1}{2}x + 0$
 up right

Question 8

5 pts

Calculator active.

Nolan is buying a season pass to a performing arts center.

- One performing art center charges \$100 for the pass, plus \$15.00 to park each visit.
- Another performing arts center charges \$75 for the pass, plus \$20.00 to park each visit.

How many times would Nolan need to visit the two performing arts centers for the cost to be the same?

- A. 4
- B. 5
- C. 6
- D. 7

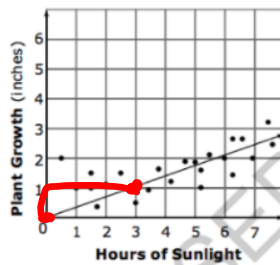
$$\begin{array}{r}
 100 + 15x = 75 + 20x \\
 -15x \qquad -15x \\
 \hline
 100 \qquad = 75 + 5x \\
 -75 \qquad -75 \\
 \hline
 25 \qquad = 5x \\
 5 \qquad \quad 5
 \end{array}$$



2019

$\frac{1 \text{ in}}{3 \text{ hr}}$

The scatterplot shows the amount of sunlight some tomato plants received and the amount each plant grew.



What is the meaning of the slope of the trend line shown on the scatterplot?

- A. A plant grows about 3 inches for every 2 hours of sunlight it receives.
- B. A plant grows about 2 inches for every 3 hours of sunlight it receives.
- C. A plant grows about 3 inches for every 1 hour of sunlight it receives.
- D. A plant grows about 1 inch for every 3 hours of sunlight it receives.

Question 10

5 pts



2015

Students were surveyed about book bags. The results are shown below.

	Male	Female
Carry a Book Bag	47	57
Do Not Carry a Book Bag	63	48

Handwritten calculations for percentages:

$$\begin{array}{r} \text{F} \\ 57 \\ \hline 105 \\ \hline 54\% \end{array} \quad \begin{array}{r} \text{M} \\ 47 \\ \hline 110 \\ \hline 43\% \end{array}$$

A student concluded that, for those in the survey, females are more likely to carry a book bag than males. Which explanation **best** supports the student's conclusion?

- A For females, 54% carry a book bag, while for males, 43% carry a book bag.
- B For females, 27% carry a book bag, while for males, 22% carry a book bag.
- C For females, 57 carry a book bag, while for males, 47 carry a book bag.
- D For females, 48 do not carry a book bag, while for males, 63 do not.

Question 11

5 pts



2019

The table shows four quantities. Each quantity is assigned a numeric label.

Quantity	Numeric Label
$\frac{3^2}{4} \cdot \frac{9}{7} = 2\frac{1}{4}$	1
$\frac{3^2}{8} \cdot \frac{7}{5} = 1\frac{1}{8}$	2
$\sqrt{2} \cdot 1 - 2$	3
$\sqrt{3} \cdot 1 - 2$	4

Handwritten calculations for quantities:

$$\begin{array}{l} 1 \sqrt{1} \\ 2 \sqrt{4} \\ 3 \sqrt{9} \end{array} \quad \begin{array}{l} \sqrt{\frac{2}{3}} \\ \sqrt{\frac{3}{5}} \end{array}$$

Handwritten sequence: 2 3 4 1

- Order the quantities from least to greatest.
- Next, write the sequence of numeric labels in the same order as their corresponding quantities.
- This sequence of numeric labels is your answer.
- Enter your answer into the grid. (For example, if the order of the numeric labels were "1, 2, 3, 4," enter the answer as "1234".)

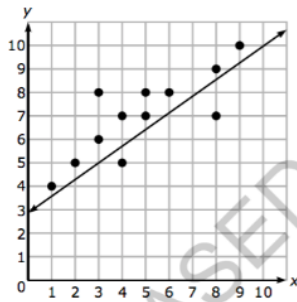
Question 12

5 pts



2019

Henry made the scatterplot shown.



The scatterplot shows the data points, and it also shows the linear model that Henry drew. Which statement **best** describes the linear model?

- A The linear model describes the data well because points are scattered above and below the line.
- B The linear model describes the data well because all the points are close to the line.
- C The linear model does not describe the data well because the line does not go through any of the points.
- D The linear model does not describe the data well because most of the points are located above the line.

Question 13

5 pts




2015

Which scenario would **most likely** show a negative association between the variables?

- A the height of a tree, x , and the amount of time it takes to climb to the top of the tree, y
- B the number of people in the mall, x , and the number of cars in the parking lot, y
- C miles traveled in a car, x , and the amount of gasoline used, y
- D time spent reading a book, x , and the number of pages left to read, y

Question 14 5 pts



What positive integer is closest to the value of $\sqrt{230}$?

$$\sqrt{225}$$

$$\textcircled{15}$$

$1 = \sqrt{1}$	$10 = \sqrt{100}$
$2 = \sqrt{4}$	$11 = \sqrt{121}$
$3 = \sqrt{9}$	$12 = \sqrt{144}$
$4 = \sqrt{16}$	$13 = \sqrt{169}$
$5 = \sqrt{25}$	$14 = \sqrt{196}$
$6 = \sqrt{36}$	$15 = \sqrt{225}$
$7 = \sqrt{49}$	$16 = \sqrt{256}$
$8 = \sqrt{64}$	$17 = \sqrt{289}$
$9 = \sqrt{81}$	$18 = \sqrt{324}$

Question 15 5 pts

No calculator.

What is the solution to the equation $-3(x + 4) = -6x + 18$?

- A. 2
- B. 10
- no solution
- infinite solutions

$$\begin{array}{r|l} -3x - 12 & = -6x + 18 \\ +3x & +3x \\ \hline -12 & = -3x + 18 \\ -18 & -18 \\ \hline -30 & = -3x \\ -3 & -3 \\ \hline 10 & = x \end{array}$$

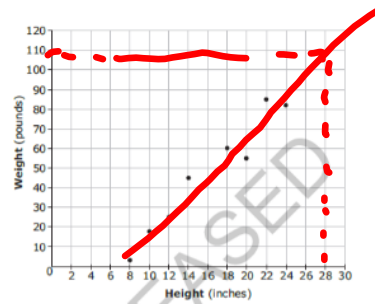
Question 16

5 pts



2015

Sharon made a scatterplot comparing the shoulder heights of dogs to their weights.



Sharon's dog has a shoulder height of 28 inches. Using a linear model, which is the *best* prediction of his dog's weight?

- A 85 pounds C 105 pounds
B 90 pounds D 120 pounds

Question 17

5 pts

Calculator active.

A system of equations is shown below.

$$\begin{aligned}y &= \frac{3}{4}x - 8 \\y &= \frac{5}{2}x - 22\end{aligned}$$

What is the solution to the system?

- A. (2, 7)
 B. (6, -3.5)
 C. (7, -2.5)
 D. (8, -2)

Graph in Desmos

Question 18

What is the sum of all the integers between $\sqrt{19}$ and $\sqrt{77}$?

pts

1= $\sqrt{1}$ 10= $\sqrt{100}$
 2= $\sqrt{4}$ 11= $\sqrt{121}$
 3= $\sqrt{9}$ 12= $\sqrt{144}$
 4= $\sqrt{16}$ 13= $\sqrt{169}$
 5= $\sqrt{25}$ 14= $\sqrt{196}$
 6= $\sqrt{36}$ 15= $\sqrt{225}$
 7= $\sqrt{49}$ 16= $\sqrt{256}$
 8= $\sqrt{64}$ 17= $\sqrt{289}$
 9= $\sqrt{81}$ 18= $\sqrt{324}$

+

$$\begin{array}{r} 5+6+7+8 \\ \hline 11 \quad 15 \\ \hline 26 \end{array}$$

Question 19

Calculator active.

One line passes through the points (-1, 6) and (2, 0)

At what point do the two lines intersect?

A. (-4, 6)

B. (-2, 8)

C. (1, 2)

D. (3, -2)

Question 20

5 pts



2019

Which choice is both the square of an integer and the cube of an integer?

- A 121 C 64
B 100 D 16