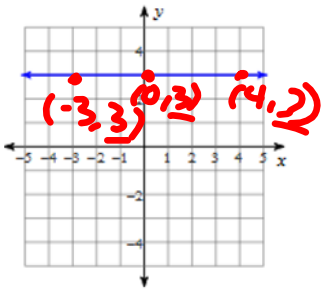
Tuesday, May 23

Chromebook collection tomorrow

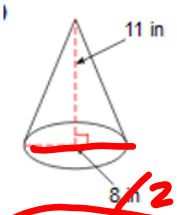
1. What is the equation of the line?




A) x = 3
C) y = x + 3
B) y = 3
D) y = -x + 3

y = 0x + 3

2. Find the volume of the cone. Use the pi button to calculate.




$V = \frac{1}{3}\pi r^2 h$

$\frac{1}{3}(3.14)(4)^2(11)$

r = 4

A) 184.3 in³
B) 105.1 in³
C) 210.2 in³
D) 92.2 in³

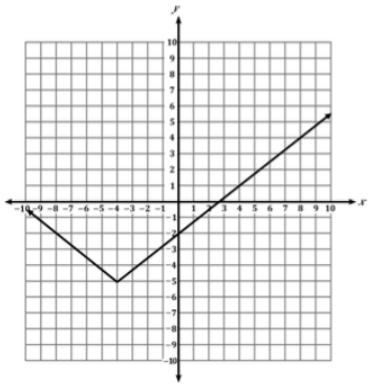
# Flocabulary Volume rap

Reminder about EOG Calculator

EOG Prep 2 Quiz found in Canvas.

1.

**Consider the graph.**



**Which statement is true?**

**A** The graph is a function because for every input, there is exactly one output.

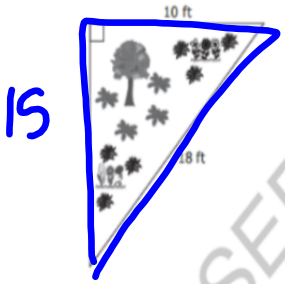
**B** The graph is a function because for multiple inputs, there is more than one output.

**C** The graph is not a function because for every input, there is exactly one output.

**D** The graph is not a function because for multiple inputs, there is more than one output.

Question 2 6.25 pts

Molly wants to put a fence around an area. The fence will follow the diagram of the triangle shown below.




15

$x^2+10^2=18^2$

$-10^2 \quad -10^2$

$\sqrt{x^2}=\sqrt{224}$

$\approx 15$

$15+10+18=43$

***About*** how much fencing does Molly need?

A 28 ft C 43 ft

B 38 ft D 49 ft

## Question 3

6.25 pts

Which expression is equivalent to 32?

A. $4^2 \times 4^1$ $= 4^3 = 4 \cdot 4 \cdot 4 = 64$

B. $\frac{2^3}{2^{-2}}$ $2^3 2^2 = 2^5 = 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 32$

C. $\frac{2^5}{2^2}$ $2^{5-2} = 2^3 = 2 \cdot 2 \cdot 2 = 8$

D. $\frac{4^3}{4^2}$ $4^{3-2} = 4$

## Question 4

6.25 pts

**Consider the table of values.**

| Input | Output |
|---|---|
| −5 | 4 |
| −1 | 0 |
| 0 | 0 |
| 1 | 7 |
| 3 | 11 |

**For which value of $x$ will the table of values represent a function?**

**A** $x = -5$

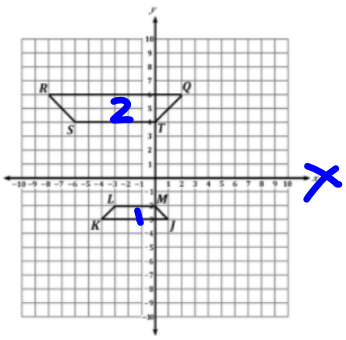
**B** $x = 0$

**C** $x = 1$

**D** $x = 3$

Question 5 6.25 pts

Consider trapezoid $JKLM$ and its image, trapezoid $QRST$, graphed on the coordinate plane.




Which sequence of transformations proves that trapezoid $JKLM$ is similar to trapezoid $QRST$?

A a dilation by a scale factor of 2 about the origin followed by a reflection across the $y$-axis

B a dilation by a scale factor of 2 about the origin followed by a reflection across the $x$-axis

C a dilation by a scale factor of $\frac{1}{2}$ about the origin followed by a reflection across the $y$-axis

D a dilation by a scale factor of $\frac{1}{2}$ about the origin followed by a reflection across the $x$-axis

Alexa earns approximately $2.6 \times 10^5$ dollars per year. Lauren earns approximately $6.8 \times 10^4$ dollars per year. ***About*** how many times more dollars does Alexa earn than Lauren?

A. 2.6

B. 3.8

C. 26

D. 38

$$\frac{2.6 \cdot 10^5}{6.8 \cdot 10^4}$$

$$= 3.82352941176$$

## Question 7

6.25 pts

**Which table shows a nonlinear relationship?**

A

| $x$ | $y$ |
|---|---|
| −4 | −4 |
| −2 | −3 |
| 0 | −2 |
| 2 | −1 |

B

| $x$ | $y$ |
|---|---|
| 0 | 0 |
| 3 | −3 |
| 6 | −6 |
| 9 | −9 |

C

| $x$ | $y$ |
|---|---|
| −1 | 6 |
| 1 | 2 |
| 3 | −2 |
| 5 | −6 |

D

| $x$ | $y$ |
|---|---|
| 0 | 0 |
| 1 | 1 |
| 2 | 4 |
| 3 | 9 |

## Question 8

6.25 pts

**Triangle $MLT$, with coordinates $M(-2,3)$, $L(4,0)$, and $T(-1,-2)$, undergoe the origin to produce triangle $QRS$. If triangle $QRS$ has coordinates $Q(-6,9)$ $S(-3,-6)$, what is the scale factor?**

A $\frac{1}{4}$

B $\frac{1}{3}$

C 3

D 4

MTL

QRS

M(-2,3)

Q(-6,9)

×3 ×3

$\frac{9}{3} = 3$

$\frac{-6}{-2} = 3$

## Question 9

6.25 pts

A cement company is making 8 solid-cement spheres. Each sphere has a diameter of 2.5 ft.

d=2.5 r=1.25

***Approximately*** how much concrete is needed to make all 8 spheres?

- A. 8.2 $ft^3$
- B. 39.3 $ft^3$
- C. 62.8 $ft^3$
- D. 65.4 $ft^3$

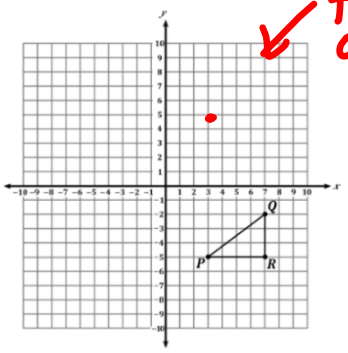
$V = \frac{4}{3}\pi r^3 \cdot 8$

$\frac{4}{3}(3.14)(1.25)^3 \cdot 8$

8.2 65.4 ·8

10

Consider triangle $PQR$.




++ quadrant

x y

P(3,-5)

P'(3,5)

If triangle $PQR$ undergoes a reflection across the $x$-axis, what are the coordinates of the vertices of the transformed triangle?

A (−3, −5), (−7, −2), and (−7, −5)

B (−3, 5), (−7, 2), and (−7, 5)

C (3, −5), (7, −2), and (7, −5)

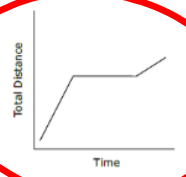
D (3, 5), (7, 2), and (7, 5)

## Question 11

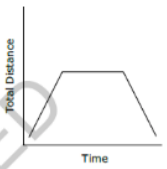
6.25 pts

Larry started riding his bike at a rapid pace. He got tired and stopped to rest. When he started again, he was going at a slower rate. Which graph ***best*** shows Larry's trip?

A




B




C

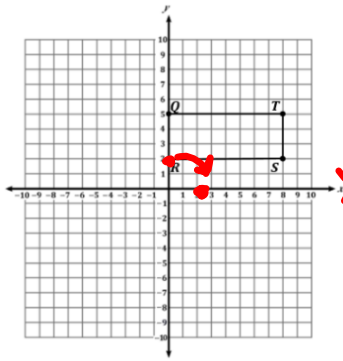

D




A

12

**Consider rectangle $QRST$.**




R(0,2)
R'(2,0)

**Rectangle $QRST$ is rotated 90° clockwise about the origin. What are the coordinates of $R'$?**

**A** $(-2, 0)$

**B** $(0, -2)$

**C** $(0, 2)$

**D** $(2, 0)$

## Question 13 — 6.25 pts

2015

A cylinder is 20 inches long and has a diameter of 10 inches. W
***approximate*** volume of the cylinder?

A 200 cubic inches
B 630 cubic inches
C 1,570 cubic inches
D 6,280 cubic inches

r=5

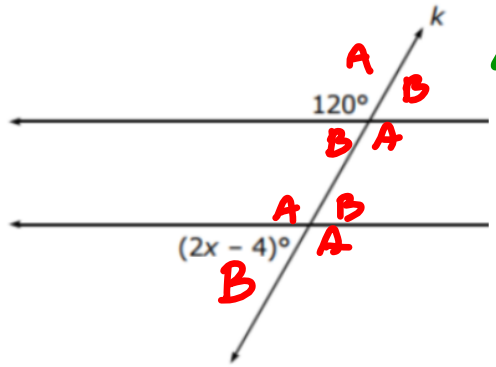
$V=\pi r^2 h$

$3.14(5)^2(20)$

1570

## Question 14 — 6.25 pts

In the drawing, lines *g* and *h* are parallel.




What is the value of *x*?

AB different = 180

$2x-4+120=180$

$2x+116=180$

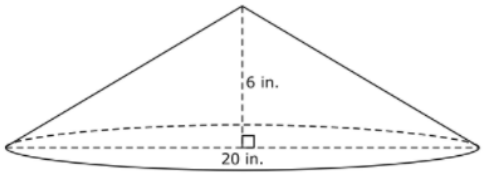
$-116\ \ -116$

$\frac{2x}{2}=\frac{64}{2}$

$x=32$

Question 15 6.25 pts

A cone is shown.




$r=10$

What is the ***approximate*** volume of the cone?

- A. 120 cubic inches
- B. 628 cubic inches
- C. 1,884 cubic inches
- D. 2,512 cubic inches

$V=\frac{1}{3}\pi r^2 h$

$\frac{1}{3}(3.14)(10)^2(6)$

628

Question 16

Which number is equivalent to $\frac{3^2 \times 3^{-5}}{3^{-3} \times 3^2}$?

- A. 27
- B. 9
- C. $\frac{1}{9}$
- D. $\frac{1}{27}$

$\frac{3^2\ 3^{-5}}{3^{-3}\ 3^2} = \frac{3\cdot3\cdot3\cdot3\cdot3}{3\cdot3\cdot3\cdot3\cdot3\cdot3\cdot3} = \frac{1}{3\cdot3}$

$\frac{1}{9}$