

Name _____

Mrs. Roubos

Date _____

8R Period _____

Review for 8R Midterm Part II's

22) The weights, in ounces, of different animals are shown in the table below:

Animal	Weight (ounces)
Elephant	6.23×10^3
Cat	1.28×10^2
Mouse	3.2×10^{-2}
Zebra	1.6×10^2

Part A:

What is the combined weight of the elephant and the zebra?

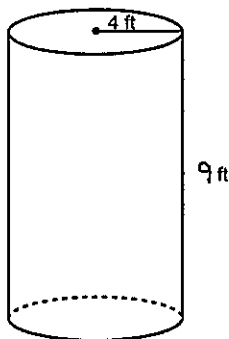
Write answer in scientific notation.

Part B:

How many times heavier than a mouse is a zebra.

Write answer in standard form.

23) Find the volume of the following cylinder. Round your answer to the nearest tenth.



$$V = \pi r^2 h$$

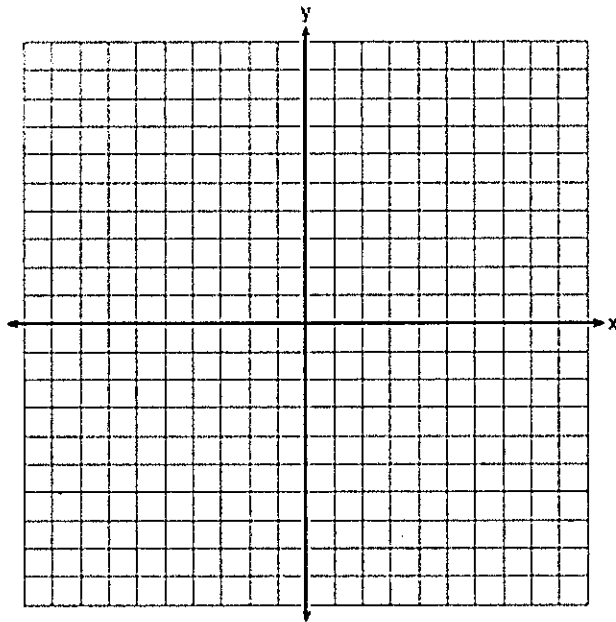
24) Solve the following system of equations for x and y algebraically. Show all your work.

$$4x + 2y = 6$$

$$y = -3x - 1$$

25) a) Graph line segment \overline{CD} with coordinates $C(-5, 4)$ and $D(2, -4)$.

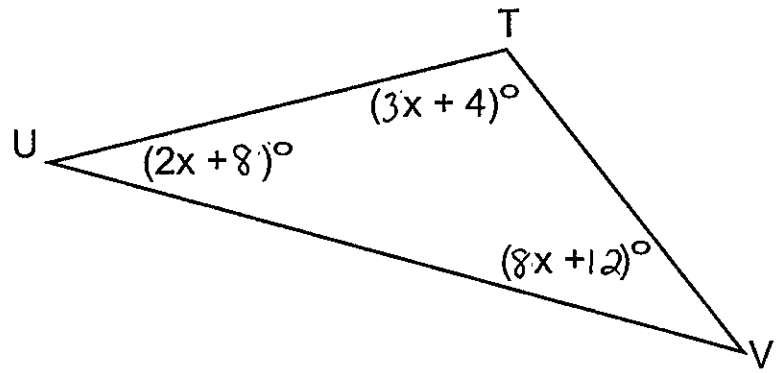
b) Find the length of \overline{CD} .
To the nearest tenth



c) Between which two consecutive integers does that length lie?

26) Given the following diagram of $\triangle TUV$

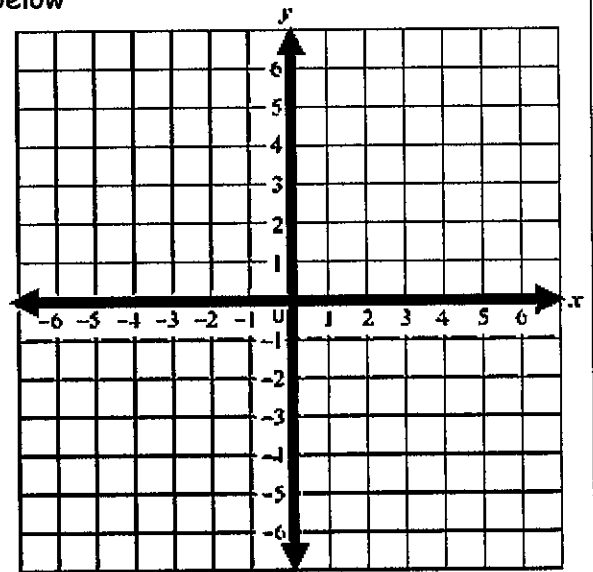
A. Solve for x



B. Solve for the $m < T$

27) A. Graph and label the equations on the coordinate grid below

$$y = x + 5$$
$$y = -\frac{1}{2}x + 2$$



B. What is the solution to the system?

(_____ , _____)

28) Sally saves the same amount of money each month in her bank's savings account. The amount of money she saved after different numbers of months is shown in the following table.

Months of savings, x	Total Amount saved (in \$), y
2	400
4	1200
6	2000
8	2800

Part A: Determine the **rate of change** for the function. _____

Part B: Determine the **y-intercept** for the function. _____

Part C: Write the **equation** that represents this function in $y = mx + b$ form. _____

Review for 8R Midterm Part II's

22) The weights, in ounces, of different animals are shown in the table below:

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✱
✱

Part A: Add
What is the combined weight of the elephant and the zebra?
Write answer in scientific notation.

✱ MUST have ()

$$(6.23 \times 10^3) + (1.6 \times 10^2) = \boxed{6.39 \times 10^3}$$

(2nd) (DRG) → (SC7)
for scient. notat.

Part B: Divide
How many times heavier than a mouse is a zebra.
Write answer in standard form.

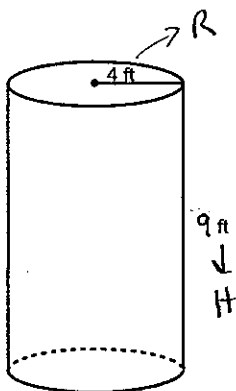
✱ Can put right into the calculator to get the answers
✱ MUST use ()

$$(1.6 \times 10^2) \div (3.2 \times 10^{-2}) = \boxed{5000}$$

↑
Bigger # 1st (Bigger Exponent) must go 1st

(2nd) (DRG) = (FLO)

23) Find the volume of the following cylinder. Round your answer to the nearest tenth.

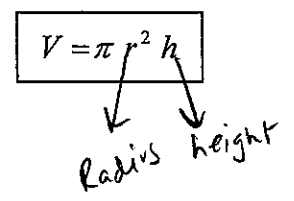


$V = \pi r^2 h$ use the π -button!

$$V = (\pi) \cdot (4)^2 \cdot (9)$$

$$V = (\pi) \cdot 16 \cdot 9$$

$$V = \boxed{452.4 \text{ ft}^3}$$



452.38

24) Solve the following system of equations for x and y algebraically. Show all your work.

$$4x + 2y = 6$$

$$y = -3x - 1$$

substitute
into the y-value

$$4x + 2y = 6$$

Distribute $4x + 2(-3x - 1) = 6$

Combine $4x - 6x - 2 = 6$

More Solve $-2x - 2 = 6$

$$\begin{array}{r} -2x - 2 = 6 \\ \quad \quad \quad +2 \quad +2 \\ \hline -2x = 8 \end{array}$$

$$\begin{array}{r} -2x = 8 \\ -2 \quad -2 \\ \hline x = -4 \end{array}$$

$$x = -4$$

$$y = -3x - 1$$

$$y = -3(-4) - 1$$

$$y = 12 - 1$$

$$y = 11$$

$$(-4, 11)$$

25) a) Graph line segment \overline{CD} with coordinates $C(-5, 4)$ and $D(2, -4)$. \perp make a right triangle

b) Find the length of \overline{CD} .

To the nearest tenth

$$a^2 + b^2 = c^2$$

$$8^2 + 7^2 = c^2$$

$$64 + 49 = c^2 \rightarrow \boxed{2nd} \boxed{x^2}$$

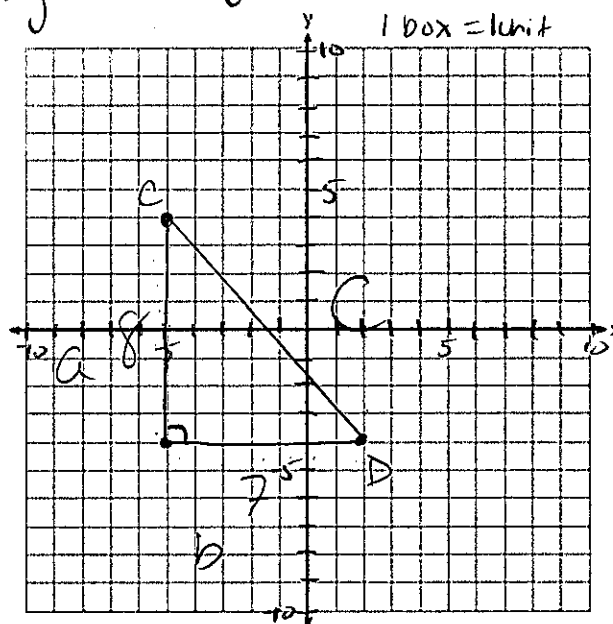
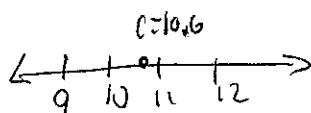
$$\sqrt{113} = \sqrt{c^2}$$

$$c = 10.6$$

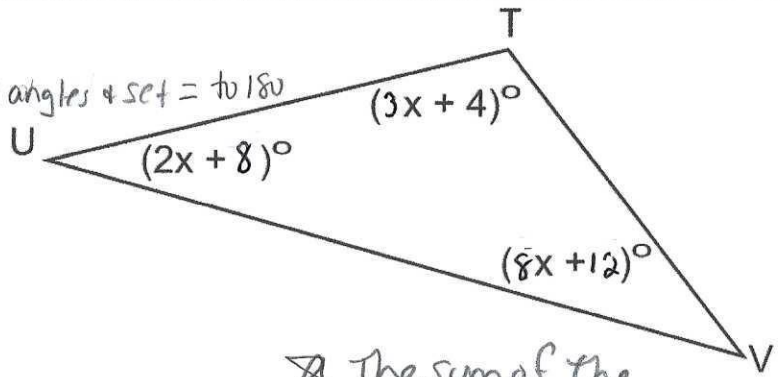
c) Between which two consecutive integers does that length lie?

2 #s in a row

$$10 \text{ \& } 11$$



26) Given the following diagram of $\triangle TUV$



A. Solve for x \Rightarrow Add up all of the angles + set = to 180

Combine
Move
Solve

$$2x + 8 + 3x + 4 + 8x + 12 = 180$$

$$13x + 24 = 180$$

$$\begin{array}{r} -24 \quad -24 \\ \hline 13x = 156 \\ \hline 13 \quad 13 \\ \hline x = 12 \end{array}$$

\Rightarrow The sum of the 3 interior angles of a triangle is 180°

B. Solve for the $m \angle T \rightarrow$ plug into the expression for T

means measure of

$$m \angle T = 3x + 4$$

$$m \angle T = 3(12) + 4$$

$$m \angle T = 36 + 4$$

$$m \angle T = 40^\circ$$

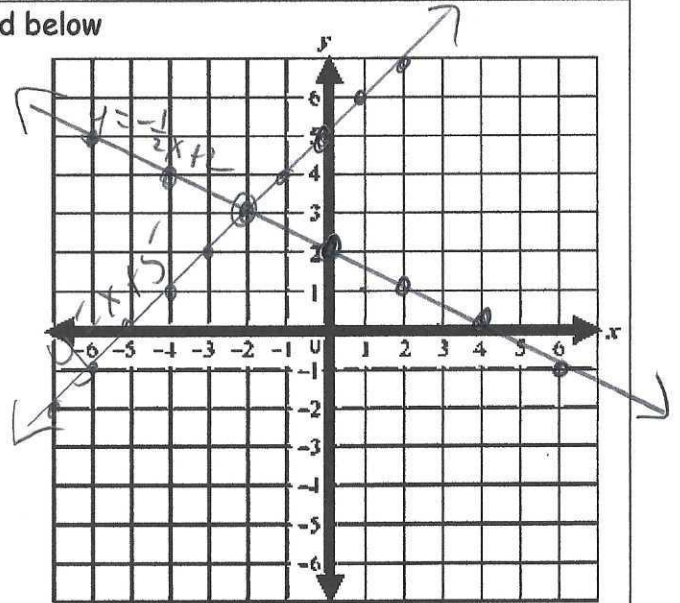
27) A. Graph and label the equations on the coordinate grid below

$$y = x + 5$$

$$y = -\frac{1}{2}x + 2$$

$y = x + 5$ $m = \frac{1}{1} \rightarrow$ $B = 5$ (on the y-axis)	$y = -\frac{1}{2}x + 2$ $m = -\frac{1}{2} \rightarrow$ $B = 2$ (on the y-axis)
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the point where they intersect



B. What is the solution to the system?

$$(-2, 3)$$

28) Sally saves the same amount of money each month in her bank's savings account. The amount of money she saved after different numbers of months is shown in the following table.

Months of savings, x	Total Amount saved (in \$), y
2	400
4	1200
6	2000
8	2800

Part A: Determine the ^{slope: m} rate of change for the function. $\frac{400}{}$

$$(2, 400) \quad (4, 1200)$$

$$x_1 \quad y_1 \quad x_2 \quad y_2$$

↓
m

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad m = \frac{1200 - 400}{4 - 2} \quad m = \frac{800}{2} \quad m = 400$$

Part B: Determine the ^b y-intercept for the function. $\frac{-400}{}$

$$(2, 400)$$

$$x \quad y$$

$$m = 400$$

$$y = mx + b$$

$$400 = 400(2) + b$$

$$400 = 800 + b$$

$$-800 \quad -800$$

$$-400 = b$$

↓
b

Part C: Write the equation that represents this function in $y = mx + b$ form.

$$y = m_x + b$$

$$m = 400$$

$$b = -400$$

$$\underline{y = 400x - 400}$$