

Name _____
Mrs. Roubos

Date _____
8R Period _____

Extra 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 cat and the zebra?

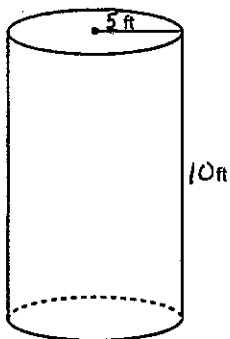
Write answer in scientific notation.

Part B:

How many times heavier than a mouse is a cat.

Write answer in standard form.

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



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

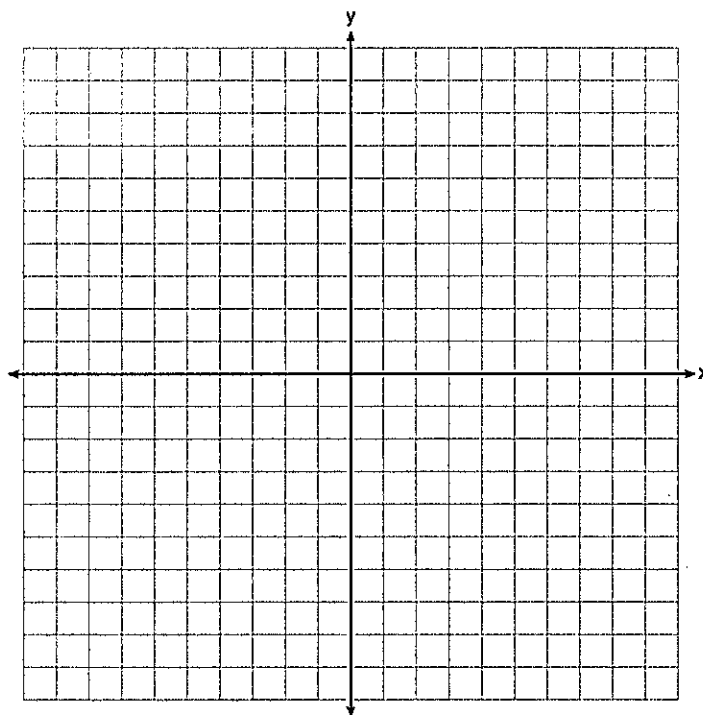
24) Solve the following system of equations for x and y algebraically. Show all your work.

$$8x + 6y = -26$$

$$y = -2x - 7$$

25) Part A: Graph line segment \overline{AB} with coordinates $A(-4, 2)$ and $B(3, 4)$.

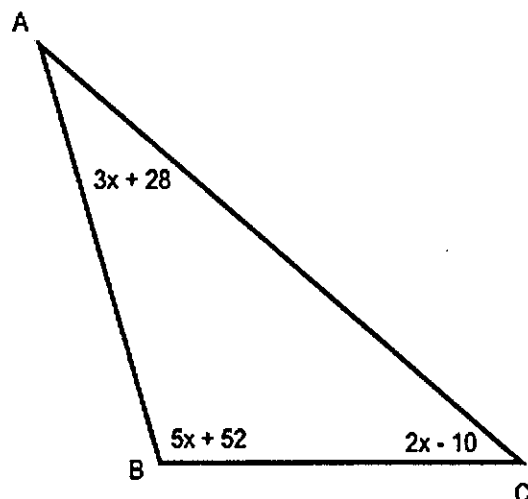
Part B: Find the length of \overline{AB} to the nearest tenth.



Part C: Between which two consecutive integers is the length of \overline{AB} ?

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

A. Solve for x

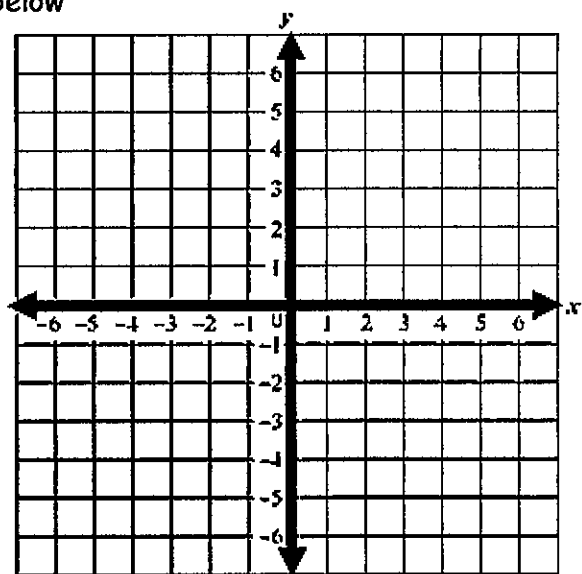


B. Solve for the $m < B$

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

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

$$y = -x - 2$$



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	800
4	1200
6	1600
8	2000

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. _____

Extra 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: Add
What is the combined weight of the cat and the zebra?
Write answer in scientific notation.

$$(1.28 \times 10^2) + (1.6 \times 10^2) = 2.88 \times 10^2$$

(2nd) (DRG) - (SCF)

put into calc!

must use ().

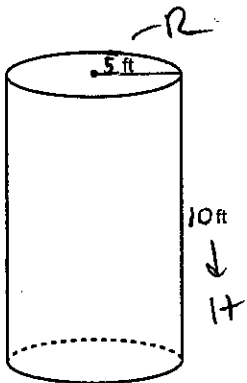
Part B: Divide
How many times heavier than a mouse is a cat.
Write answer in standard form.

$$(1.28 \times 10^2) \div (3.2 \times 10^{-2}) = 4000$$

(2nd) (DRG) ← (FCO)

Bigger # 1st (Bigger exponent) must go 1st!

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



$$V = \pi r^2 h \rightarrow \text{use } \pi \text{-button}$$

$$V = \pi \cdot (5)^2 \cdot 10$$

$$V = \pi \cdot 25 \cdot 10$$

$$V = 785.4 \text{ ft}^3$$

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

radius height

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

$$\begin{aligned} 8x + 6y &= -26 \\ y &= -2x - 7 \end{aligned} \quad \left. \begin{array}{l} \text{plug into the} \\ \text{y!} \end{array} \right\}$$

$$\begin{aligned} 8x + 6y &= -26 \\ \text{Distribute } 8x + 6(-2x - 7) &= -26 \\ \text{Combine } 8x - 12x - 42 &= -26 \\ \text{Move } -4x - 42 &= -26 \\ \text{Solve } \begin{array}{r} -4x - 42 \\ \underline{+42 \quad +42} \\ -4x = 16 \\ \underline{-4 \quad -4} \\ x = -4 \end{array} \end{aligned}$$

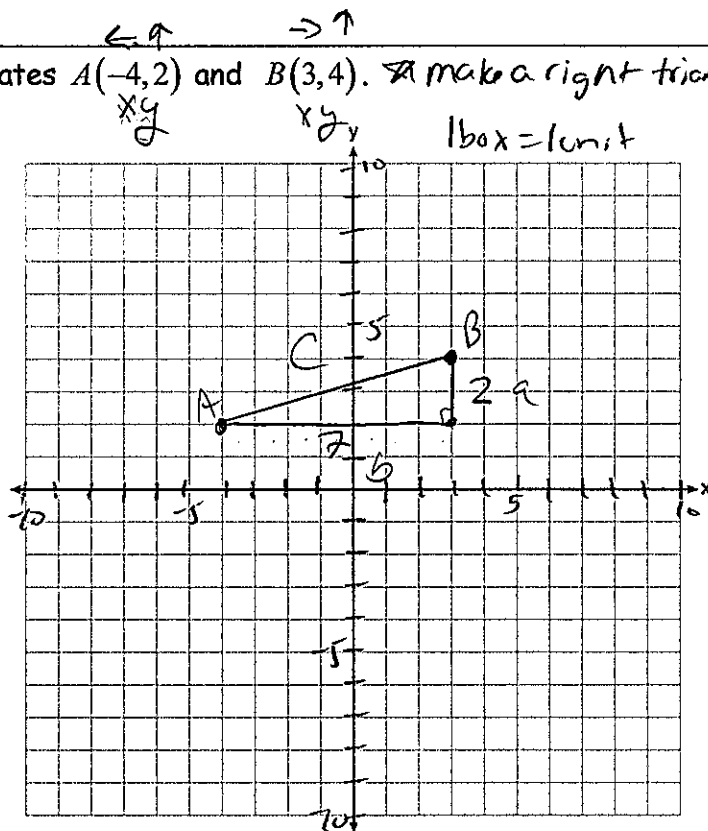
$$\begin{aligned} y &= -2x - 7 \\ y &= -2(-4) - 7 \\ y &= 8 - 7 \\ y &= 1 \end{aligned}$$

$$\boxed{(-4, 1)}$$

25) Part A: Graph line segment \overline{AB} with coordinates $A(-4, 2)$ and $B(3, 4)$. ~~A~~ make a right triangle

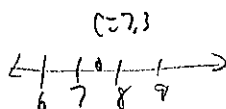
Part B: Find the length of \overline{AB} to the nearest tenth.

$$\begin{aligned} a^2 + b^2 &= c^2 \\ 2^2 + 7^2 &= c^2 \\ 4 + 49 &= c^2 \rightarrow \boxed{2 \text{ rows } \times 2} \\ \sqrt{53} &= \sqrt{c^2} \\ \boxed{c = 7.3} \end{aligned}$$



Part C: Between which two consecutive integers is the length of \overline{AB} ?

$\boxed{7 \text{ and } 8}$



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

A. Solve for x

Add the 3 expressions up and = it to 180

The sum of the 3 \angle s in a \triangle add up to 180°

Combine
Max
Solve

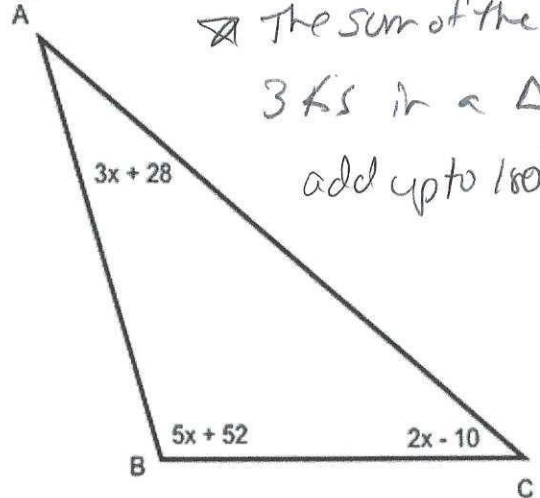
$$3x + 28 + 5x + 52 + 2x - 10 = 180$$

$$10x + 70 = 180$$

$$\begin{array}{r} -70 \\ -70 \end{array}$$

$$\frac{10x}{10} = \frac{110}{10}$$

$$x = 11$$



B. Solve for the $m \angle B$

→ substitute in to the expression for B

means
measure
of

$$m \angle B = 5x + 52$$

$$m \angle B = 5(11) + 52$$

$$m \angle B = 55 + 52$$

$$m \angle B = 107^\circ$$

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

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

$$y = -x - 2$$

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

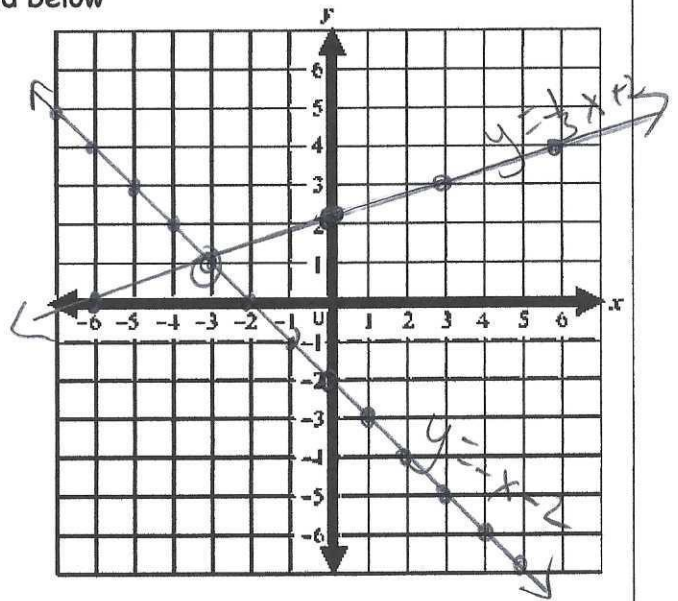
$m = \frac{1}{3}$ ↑
over 3 →

$$y = -x - 2$$

$m = -\frac{1}{1}$ ↓
over 1 →

$B = 2$
y-intercept
(on the y-axis)

$B = -2$
y-intercept
(on the y-axis)



B. What is the solution to the system?

$$(-3, 1)$$

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	800
4	1200
6	1600
8	2000

Part A: Determine the ^{Step: m}rate of change for the function. $\frac{200}{1}$

$$\begin{matrix} (2, 800) & (4, 1200) \\ x_1, y_1 & x_2, y_2 \end{matrix}$$

$$\begin{matrix} \downarrow \\ m \end{matrix}$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} \quad m = \frac{1200 - 800}{4 - 2} \quad m = \frac{400}{2} \quad m = 200$$

Part B: Determine the ^by-intercept for the function. $\frac{400}{1}$

$$\begin{matrix} (2, 800) \\ x, y \end{matrix}$$

$$m = 200$$

$$y = mx + b$$

$$800 = 200(2) + b$$

$$800 = 400 + b$$

$$\begin{array}{r} -400 \quad -400 \\ \hline \end{array}$$

$$400 = b$$

$$\begin{matrix} \downarrow \\ b \end{matrix}$$

Part C: Write the equation that represents this function in $y = mx + b$ form. $\underline{y = 200x + 400}$

$$\begin{matrix} y = mx + b \\ m = 200 \\ b = 400 \end{matrix}$$