Algebra 1 ECA Remediation Name Answer Key

Homework 10.1

Find the slope, x-intercept, and y-intercept of the following.

1) $5x + 4y = -4$

$5(0) + 4y = -4$

$\frac{4y}{4} = \frac{-4}{4}$

$\boxed{y = -1}$

x	y
0	-1
-4/5	0

$5x + 4(0) = -4$

$\frac{5x}{5} = \frac{-4}{5}$

$\boxed{x = \frac{-4}{5}}$

$5x + 4y = -4$

$-5x \quad -5x$

$\frac{4y}{4} = \frac{-5x}{4} - \frac{4}{4}$

$y = \frac{-5}{4}x - 1$

$\boxed{m = \frac{-5}{4}}$

2) $x - y = 3$

x	y
0	-3
3	0

$(0) - y = 3$

$\frac{-y}{-1} = \frac{3}{-1}$

$\boxed{y = -3}$

$x - (0) = 3$

$\boxed{x = 3}$

$x - y = 3$

$-x \quad -x$

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

$y = x - 3$

$\boxed{m = 1}$

Name the x- and y-intercepts.

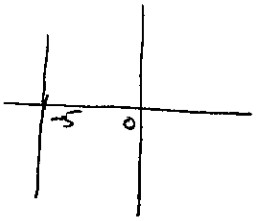
3) $x = -5$ Vertical Line

no slope

no y-intercept

x-intercept

(-5, 0)

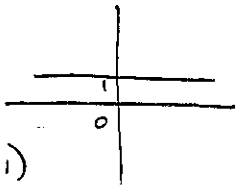


4) $y = 1$ Horizontal Lines

Slope = 0

no x-intercept

y-intercept → (0, 1)



Determine the y-intercept of each graph.

5) $-24 = 8x + 6y$

$-8x \quad -8x$

$\frac{-24}{6} - \frac{8x}{6} = \frac{6y}{6}$

$-4 - \frac{4x}{3} = y$

$y = -\frac{4}{3}x - 4$

or $-24 = 8(0) + 6y$

$\frac{-24}{6} = \frac{6y}{6}$

$\boxed{-4 = y}$

$m = -\frac{4}{3}$

$\boxed{b = -4}$

6) $y - 5 = -5x$

$+5 \quad +5$

$y = -5x + 5$

$m = -5$

$\boxed{b = 5}$

or $y - 5 = -5(0)$

$y - 5 = 0$

$+5 \quad +5$

$\boxed{y = 5}$

Solve each equation for the indicated variable.

7) $R = \frac{es + p}{m}$, solve for p

$m(R) = \left(\frac{es + p}{m}\right)m$

$mR = es + p$

$-es \quad -es$

$\boxed{mR - es = p}$

8) $V = 4\pi r^2 \cdot h$, solve fore h

$\frac{V}{4\pi r^2} = \frac{4\pi r^2 \cdot h}{4\pi r^2}$

$\frac{V}{4\pi r^2} = h$

Answers to Homework 10.1

1) $m = -\frac{5}{4}$, b = -1, x – int = $-\frac{4}{5}$ 2) m = 1, b = -3, x – int = 3 3) (-5,0), no y - int

4) no x - int, (0, 1) 5) b = -4 or (0, -4) 6) b = 5, or (0, 5) 7) mR – es = p

8) $\frac{V}{4\pi r^2} = h$