Algebra **REVIEW 5.1 – 5.5** Name Key

Hour

SECTION 5.1

Write an equation of the line with a slope of -4 and a y - intercept of 1. $y = -4x + 1$

$y = mx + b$

Write an equation of the line that passes through the given points.

(-9, 1) and (0, -8) $y = mx + b$ $y = -1x + -8$

$m = -1$, $b = -8$

$\frac{1 - -8}{-9 - 0} = \frac{9}{-9} = -1$

(-4, -6) and (0, 6) $m = 3$, $b = 6$ $y = 3x + 6$

$\frac{-6 - 6}{-4 - 0} = \frac{-12}{-4} = 3$

Write an equation for the linear function f with f(0) = -4 and f(-1) = -9.

$(0, -4)$ $(-1, -9)$ $m = \frac{-4 + 9}{0 - -1} = \frac{5}{1} = 5$

$m = 5$, $b = -4$ $y = 5x + -4$

An electronics game store sells used games for $12.99 per game with a $20 membership fee. Write an equation that gives the total cost to become a member and buy games as a function of the number of games that are purchased. Then find the cost for 6 games.

$m = 12.99$, $b = 20$

$y = 12.99x + 20$

$y = 12.99(6) + 20$

$y = \$97.94$

SECTION 5.2

Write an equation of the line that passes through the given point with the given slope.

$y - y_1 = m(x - x_1)$ point slope

(4, -1) m = -1 $y + 1 = -1(x - 4)$

(2, 0) m = 4 $y - 0 = 4(x - 2)$

$y = 4(x - 2)$

$y = 4x - 8$

Write an equation of the line that passes through the given points.

(2, 3) and (4, 7) $y - 3 = 2(x - 2)$

$m = \frac{3 - 7}{2 - 4} = \frac{-4}{-2} = 2$

$y - 3 = 2x - 4$

$+3 \quad +3$

$y = 2x - 1$

(-5, 7) and (2, -7) $y - 7 = -2(x - 2)$

$m = \frac{7 + 7}{-5 - 2} = \frac{14}{-7} = -2$

$y + 7 = -2x + 4$

$-7 \quad -7$

$y = -2x - 3$

A camp charges a registration fee and a daily amount. If the total bill for one camper was $338 for 12 days and the total bill for another camper was $506 for 19 days, how much will the bill be for a camper who enrolls for 30 days?

two data pts. (12, 338) (19, 506)

$m = \frac{506 - 338}{19 - 12} = \frac{168}{7} = 24$

$y - y_1 = m(x - x_1)$

$y - 338 = 24(x - 12)$

$y - 338 = 24x - 288$

$y = 24x + 50$

$y = 24x + 50$

$y = 24(30) + 50$

$\$770$