3B. Writing Linear Equations Pages 13-14

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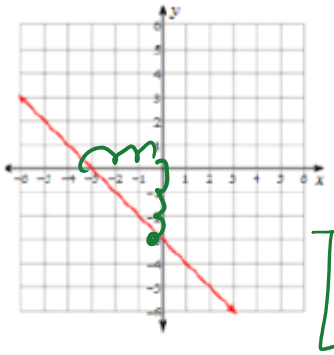
8 Give the equation of the line graphed below.

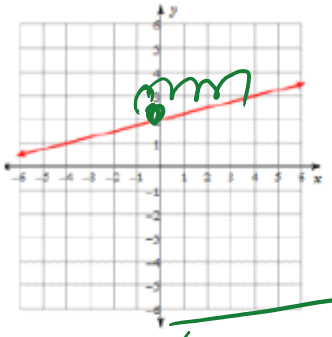


$b = -3$

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

$y = -x - 3$

Give the equation of the line graphed below.



$b = 2$

$m = \frac{1}{4}$

$y = \frac{1}{4}x + 2$

9 Raul finds $45 while washing his clothes. He plans to use that money to buy lunch and spends $5 a day on his meal. $b = 45$ $m = -5$

A) Write the equation that models this situation.

$y = -5x + 45$

B) Then, find how much he has left after 5 days of purchasing lunch. $x = 5$

$y = -5(5) + 45$

$y = -25 + 45$

$y = \$20$

Tom the hippo finds a pond with 76 lily pads. Tom eats 7 lily pads an hour. $b = 76$ $m = -7$

A) Write the equation that models this situation.

$y = -7x + 76$

B) Then, find how many lily pads are left after 4 hours. $x = 4$

$y = -7(4) + 76$

$y = -28 + 76$

$y = 46$ Lily pads

10 Give the explicit form for the sequence: 11, 9, 7, 5, ... $f(1) = 11$ $d = -2$

$f(n) = f(1) + d(n-1)$

$f(n) = 11 + -2(n-1)$

$f(n) = 11 - 2n + 2$

$f(n) = -2n + 13$

Give the explicit form for the sequence: −3, −8, −13, −18, ... $f(1) = -3$ $d = -5$

$f(n) = f(1) + d(n-1)$

$f(n) = -3 - 5(n-1)$

$f(n) = -3 - 5n + 5$

$f(n) = -5n + 2$

11	Give the list of the first 4 terms of the sequence if... $f(n) = 3n + 3$ $y = mx + b$ $f(0) = 3$ $d = 3$ $f(1) = 3 + 3 = 6$ $f(2) = 6 + 3 = 9$ $f(3) = 9 + 3 = 12$ $f(4) = 12 + 3 = 15$	Give the list of the first 4 terms of the sequence if... $f(n) = 5n - 2$ $y = mx + b$ $f(0) = -2$ $d = 5$ $f(1) = -2 + 5 = 3$ $f(2) = 3 + 5 = 8$ $f(3) = 8 + 5 = 13$ $f(4) = 13 + 5 = 18$
12	Give the list of the first 4 terms of the sequence if... $f(1) = -5$ $f(n) = f(n-1) + 4$ $d = 4$ $f(1) = -5$ $f(2) = -5 + 4 = -1$ $f(3) = -1 + 4 = 3$ $f(4) = 3 + 4 = 7$	Give the list of the first 4 terms of the sequence if... $f(1) = 15$ $f(n) = f(n-1) - 6$ $d = -6$ $f(1) = 15$ $f(2) = 15 - 6 = 9$ $f(3) = 9 - 6 = 3$ $f(4) = 3 - 6 = -3$
13	Solve the equation $w + 3 = 4w - 15$ $-w \quad -w$ $3 = 3w - 15$ $+15 \quad +15$ $\frac{18}{3} = \frac{3w}{3}$ $6 = w$	Solve the equation $1 + 2y = 1 + 8y$ $-2y \quad -2y$ $1 = 1 + 6y$ $-1 \quad -1$ $\frac{0}{6} = \frac{6y}{6}$ $0 = y$


6 = w
6 − 6
0 = y