① Find Slope $\frac{\Delta y}{\Delta x}$ ② find b (use x, y, & m)

③ Equation w/ correct variables

Creating Equations from a Table

1. The total cost (c) for miles (m) traveled in a taxi.

m	2	4	6	8	10
c	$4.50	$6	$7.50	$9	$10.50

(+2, +2, +2, +2; +1.5, +1.5, +1.5, +1.5)

Slope $= \frac{1.5}{2} = .75$

$y = .75x + 3$

$4.50 = .75(2) + b$

$4.50 = 1.5 + b$

$3 = b$

$C = .75m + 3$

2. The total cost (c) to buy guitar picks (p).

p	5	10	15	20	25
c	$2	$4	$6	$8	$10

(+5, +5, +5, +5; +2, +2, +2, +2)

$m = \frac{2}{5}$

$y = \frac{2}{5}x$

$2 = \frac{2}{5}(5) + b$

$2 = 2 + b$

$0 = b$

$C = \frac{2}{5}P$

3. The number of frogs (f) ordered for students (s) in science class.

s	9	15	21	27	33
f	7	9	11	13	15

(+6, +6, +6, +6; +2, +2, +2, +2)

$m = \frac{2}{6} = \frac{1}{3}$

$Y = \frac{1}{3}x + 4$

$7 = \frac{1}{3}(9) + b$

$7 = 3 + b$

$4 = b$

$f = \frac{1}{3}s + 4$

4. The distance traveled (d) in hours (h).

h	2	3	4	5	6
d	14	21	28	35	42

(+1, +1, +1, +1; +7, +7, +7, +7)

$m = 7$

$y = 7x$

$14 = 7(2) + b$

$14 = 14 + b$

$0 = b$

$d = 7h$

5. The total weight of an aquarium (a) holding gallons (g) of water.

g	100	110	120	130	140
a	930	1015	1100	1185	1270

(+10, +10, +10, +10; +85, +85, +85, +85)

$\frac{85}{10} = \frac{17}{2} = 8.5$

$y = 8.5x + 80$

$930 = 8.5(100) + b$

$930 = 850 + b$

$80 = b$

$a = 8.5g + 80$

or $a = \frac{17}{2}g + 80$

6. The number of hotel rooms (h) for athletes (a).

a	8	12	16	20	24
h	2	3	4	5	6

(+4, +4, +4, +4; +1, +1, +1, +1)

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

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

$2 = \frac{1}{4}(8) + b$

$2 = 2 + b$

$0 = b$

$h = \frac{1}{4}a$

7. The total cost (c) per tournament (t).

t	2	4	6	8	10
c	\$225	\$400	\$575	\$750	\$925

175 175

$m = \frac{175}{2} = 87.5$

$225 = 87.5(2) + b$

$225 = 175 + b$

$50 = b$

$y = 87.5x + 50$

$c = 87.5t + 50$

or $c = \frac{175}{2}t + 50$

8. The money earned (m) in a number of weeks (w).

w	2	4	6	8	10
m	\$10	\$20	\$30	\$40	\$50

10

$m = \frac{10}{2} = 5$

$10 = 2(5) + b$

$10 = 10 + b$

$0 = b$

$y = 5x$

$m = 5w$

9. The amount of profit (p) of a stand selling lemon shake-ups (L).

l	250	300	350	400	450
p	\$50	\$200	\$350	\$500	\$650

150

$m = \frac{150}{50} = 3$

$50 = 3(250) + b$

$50 = 750 + b$

$-700 = b$

$y = 3x - 700$

$p = 3l - 700$

10. The total cost (c) per hold of golf (g).

g	9	18	27	36	45
c	\$15	\$30	\$45	\$60	\$75

15 15

$m = \frac{15}{9} = \frac{5}{3}$

$15 = \frac{15}{9}(9) + b$

$15 = 15 + b$

$0 = b$

$y = \frac{5}{3}x$

$c = \frac{5}{3}g$

11. The length (L) of a bungee cord that is stretched depending on the weight (w) of the jumper.

w	100	110	120	130	140
l	80	83	86	89	92

3

$m = \frac{3}{10}$

$80 = \frac{3}{10}(100) + b$

$80 = 30 + b$

$50 = b$

$y = \frac{3}{10}x + 50$

$l = \frac{3}{10}w + 50$

12. The number of dogs (d) to herd cattle (c).

c	9	15	21	27	33
d	3	5	7	9	11

6

2

$m = 2/6 = \frac{1}{3}$

$3 = 9(\frac{1}{3}) + b$

$3 = 3 + b$

$0 = b$

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

$d = \frac{1}{3}c$