

# Finding Slope from a Table

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

Find the slope of each table. Choose two points and use the formula for the slope of two points. SHOW YOUR WORK.

Find the slope of the line that passes through each pair of points.

1)  $(2, 5)(3, 6)$   $\frac{1}{1}$       2)  $(-2, 4)(6, 6)$   $\frac{1}{4}$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 5}{3 - 2} = \frac{1}{1} = 1$$

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{6 - 4}{6 - (-2)} = \frac{2}{8} = \frac{1}{4}$$

3) A soft drink bottle filling machine can fill 22 bottles per minute. The table shows the relationship between the number of minutes and the number of bottles filled.

Time (minutes) X	1	2	3	4	5
Bottles filled Y	22	44	66	88	110

$(1, 22)(2, 44)$   $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{44 - 22}{2 - 1} = \frac{22}{1} = 22$

4) The table shows the volume of water released by Hoover Dam over a certain period of time.

Water Released from Hoover Dam	
Time (s) X	Volume of Water (m <sup>3</sup> ) Y
5	75,000
10	150,000
15	225,000
20	300,000

$(5, 75000)(10, 150000)$   
X: Y: X<sub>2</sub> Y<sub>2</sub>

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{150000 - 75000}{10 - 5} = \frac{75000}{5} = 15000$$

Sound Intensity					
Input Signal Power (W) X	6	8	12	20	28
Output Sound Intensity (W/m <sup>2</sup> ) Y	6	16	36	76	116

$(6, 6)(8, 16)$   $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{16 - 6}{8 - 6} = \frac{10}{2} = 5$

6) The table shows an employee's pay per number of hours worked.

Hours Worked X	0	1	2	3	4	5	6
Pay (\$) Y	0	9.50	19.00	28.50	38.00	47.50	57.00

$(0, 0)(1, 9.50)$   $m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{9.50 - 0}{1 - 0} = 9.50$

7) The table shows how much water was in a swimming pool as it was being filled

Time (min)	Amount of Water (gal)
10	40
13	52
16	64
19	76

$(10, 40)(13, 52)$   
X: Y: X<sub>2</sub> Y<sub>2</sub>

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{52 - 40}{13 - 10} = \frac{12}{3} = 4$$

x	y
-2	4
0	2
2	0
4	-2

$(-2, 4)(0, 2)$   
X: Y: X<sub>2</sub> Y<sub>2</sub>

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{2 - 4}{0 - (-2)} = \frac{-2}{2} = -1$$

x	2	4	6	7	8
y	8	4	0	-2	-4

$(2, 8)(4, 4)$   
X: Y: X<sub>2</sub> Y<sub>2</sub>

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{4 - 8}{4 - 2} = \frac{-4}{2} = -2$$

10) The table below shows the cost (y) to play (x) games at the amusement park.

Game X	6	9	12	15
Cost Y	4	5	6	7

$(6, 4)(9, 5)$   
X: Y: X<sub>2</sub> Y<sub>2</sub>

$$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{5 - 4}{9 - 6} = \frac{1}{3}$$

Solve each equation.

11)  $4x + 3 = 11$

$$4x + 3 - 3 = 11 - 3$$

$$4x = 8$$

$$\frac{4x}{4} = \frac{8}{4} \quad \boxed{x = 2}$$

13)  $3x + 4 = 4x - 3$

$$3x + 4 - 4x = 4x - 3 - 4x$$

$$-x + 4 = -3$$

$$-x + 4 - 4 = -3 - 4$$

$$-x = -7$$

$$\frac{-x}{-1} = \frac{-7}{-1} \quad \boxed{x = 7}$$

12)  $\frac{12 + x}{3} = 9$

$$3 \cdot \frac{12 + x}{3} = 9 \cdot 3$$

$$12 + x = 27$$

$$12 - 12 + x = 27 - 12 \quad \boxed{x = 15}$$

14)  $2(x + 3) = 6x - 6$

$$2(x) + 2(3) = 6x - 6$$

$$2x + 6 = 6x - 6$$

$$2x + 6 - 6x = 6x - 6 - 6x$$

$$-4x + 6 = -6$$

$$-4x + 6 - 6 = -6 - 6$$

$$-4x = -12$$

$$\frac{-4x}{-4} = \frac{-12}{-4} \quad \boxed{x = 3}$$