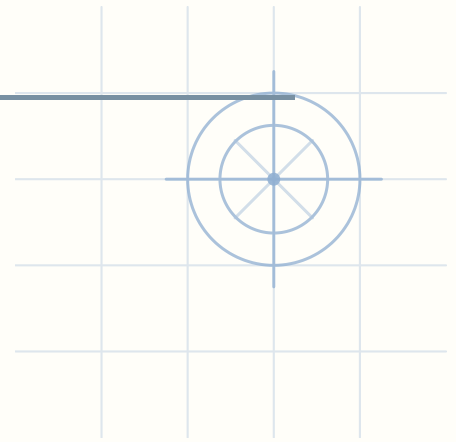


Slope and y-intercept — Slope from an equation

Name: _____

Date: _____

Write the slope of each line.



1 $y = -9x + 17$ $m = \underline{-9}$

2 $y = 11x$ $m = \underline{\hspace{1cm}}$

3 $y = -6x - 19$ $m = \underline{\hspace{1cm}}$

4 $y = -21$ $m = \underline{\hspace{1cm}}$

5 $y = x - 6$ $m = \underline{\hspace{1cm}}$

6 $y = 10x + 30$ $m = \underline{\hspace{1cm}}$

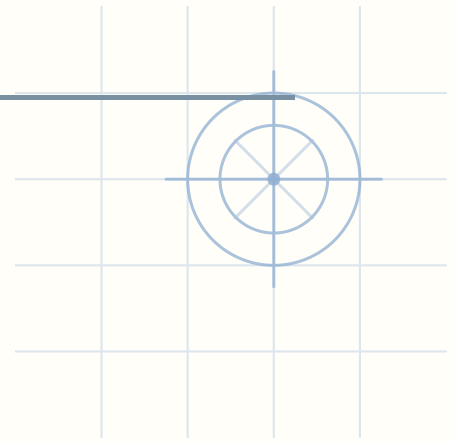


Slope and y-intercept — The y-intercept

Name: _____

Date: _____

Write the y-intercept of each line.



1 $y = -6x - 16$ $b = \underline{-16}$

2 $y = 4x - 28$ $b = \underline{\hspace{2cm}}$

3 $y = -12x$ $b = \underline{\hspace{2cm}}$

4 $y = -8x - 26$ $b = \underline{\hspace{2cm}}$

5 $y = 3x + 29$ $b = \underline{\hspace{2cm}}$

6 $y = 9x + 34$ $b = \underline{\hspace{2cm}}$

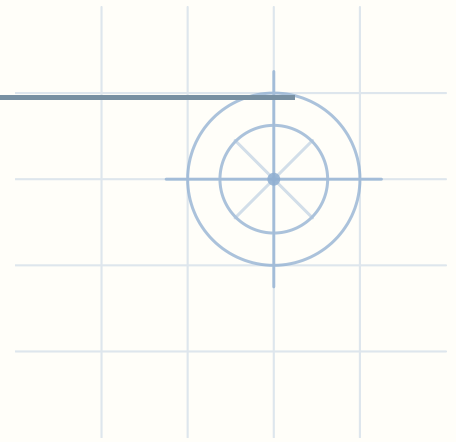


Slope and y-intercept — Slope from two points

Name: _____

Date: _____

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



1 $(-3, -4)$ and $(1, 16)$ $m = \underline{5}$

2 $(2, 6)$ and $(3, 10)$ $m = \underline{\hspace{1cm}}$

3 $(-1, -4)$ and $(4, -29)$ $m = \underline{\hspace{1cm}}$

4 $(4, 1)$ and $(7, 1)$ $m = \underline{\hspace{1cm}}$

5 $(-4, 3)$ and $(0, 3)$ $m = \underline{\hspace{1cm}}$

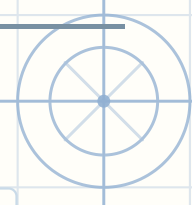
6 $(-3, 2)$ and $(1, -2)$ $m = \underline{\hspace{1cm}}$



Rate of change — The rate of change

Name: _____

Date: _____



Each table is a straight line. Find what each one asks for.

1

x	3	4	5	6
y	18	12	6	0

rate $\rightarrow$ -6

y step = -6, x step = 1

$-6 \div 1 = -6$

rate of change = -6

2

x	2	3	4	5
y	58	49	40	31

rate $\rightarrow$ _____

3

x	7	12	17	22
y	56	46	36	26

rate $\rightarrow$ _____

4

x	6	12	18	24
y	32	44	56	68

rate $\rightarrow$ _____

5

x	9	11	13	15
y	66	76	86	96

rate $\rightarrow$ _____

6

x	7	8	9	10
y	27	23	19	15

rate $\rightarrow$ _____

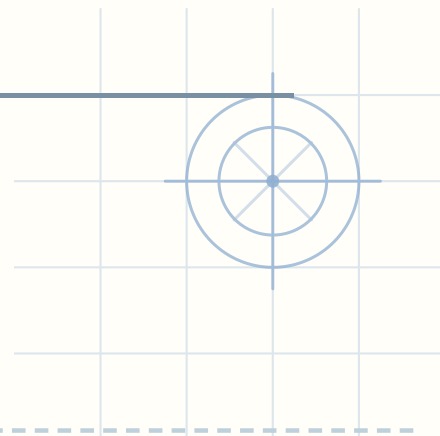


Which rate is greater — An equation against a written rate

Name: _____

Date: _____

Which one is greater, A or B? Work out each rate first. Circle one.



- 1 A 36 meters in 4 seconds
B $y = 15x$, y meters and x seconds A / **B**
-

- 2 A $y = 4x$, y dollars and x weeks
B 30 dollars in 5 weeks A / B
-

- 3 A $y = 15x$, y dollars and x weeks
B 18 dollars in 9 weeks A / B
-

- 4 A 135 liters in 9 minutes
B $y = 12x$, y liters and x minutes A / B
-

- 5 A $y = 13x$, y pages and x days
B 18 pages in 2 days A / B
-

- 6 A 20 km in 4 hours
B $y = 6x$, y km and x hours A / B
-



Power Pack · Slope and rate of change — Answer key

Slope from a graph

1. $y = -9x + 17 \rightarrow m = -9$

2. $y = 11x \rightarrow m = 11$

3. $y = -6x - 19 \rightarrow m = -6$

4. $y = -21 \rightarrow m = 0$

5. $y = x - 6 \rightarrow m = 1$

6. $y = 10x + 30 \rightarrow m = 10$

Reading the intercept

1. $y = -6x - 16 \rightarrow b = -16$

2. $y = 4x - 28 \rightarrow b = -28$

3. $y = -12x \rightarrow b = 0$

4. $y = -8x - 26 \rightarrow b = -26$

5. $y = 3x + 29 \rightarrow b = 29$

6. $y = 9x + 34 \rightarrow b = 34$

Slope from two points

1. $(-3, -4)$ and $(1, 16) \rightarrow m = 5$

2. $(2, 6)$ and $(3, 10) \rightarrow m = 4$

3. $(-1, -4)$ and $(4, -29) \rightarrow m = -5$

4. $(4, 1)$ and $(7, 1) \rightarrow m = 0$

5. $(-4, 3)$ and $(0, 3) \rightarrow m = 0$

6. $(-3, 2)$ and $(1, -2) \rightarrow m = -1$

Rate from a table

1. $x: 3, 4, 5, 6$ $y: 18, 12, 6, 0$
 $\rightarrow -6$ (y moves -6 while x moves 1 , and $-6 \div 1 = -6$)

2. $x: 2, 3, 4, 5$ $y: 58, 49, 40, 31$
 $\rightarrow -9$ (y moves -9 while x moves 1 , and $-9 \div 1 = -9$)

3. $x: 7, 12, 17, 22$ $y: 56, 46, 36, 26$
 $\rightarrow -2$ (y moves -10 while x moves 5 , and $-10 \div 5 = -2$)

4. $x: 6, 12, 18, 24$ $y: 32, 44, 56, 68$
 $\rightarrow 2$ (y moves 12 while x moves 6 , and $12 \div 6 = 2$)

5. $x: 9, 11, 13, 15$ $y: 66, 76, 86, 96$
 $\rightarrow 5$ (y moves 10 while x moves 2 , and $10 \div 2 = 5$)

6. $x: 7, 8, 9, 10$ $y: 27, 23, 19, 15$
 $\rightarrow -4$ (y moves -4 while x moves 1 , and $-4 \div 1 = -4$)

Compare rates

1. A 36 meters in 4 seconds
 $B y = 15x$, y meters and x seconds $\rightarrow B$ (A is 9 and B is 15 per second)

2. A $y = 4x$, y dollars and x weeks
B 30 dollars in 5 weeks $\rightarrow B$ (A is 4 and B is 6 per week)

3. A $y = 15x$, y dollars and x weeks
B 18 dollars in 9 weeks $\rightarrow A$ (A is 15 and B is 2 per week)

4. A 135 liters in 9 minutes
 $B y = 12x$, y liters and x minutes $\rightarrow A$ (A is 15 and B is 12 per minute)

5. A $y = 13x$, y pages and x days
B 18 pages in 2 days $\rightarrow A$ (A is 13 and B is 9 per day)

6. A 20 km in 4 hours
 $B y = 6x$, y km and x hours $\rightarrow B$ (A is 5 and B is 6 per hour)

