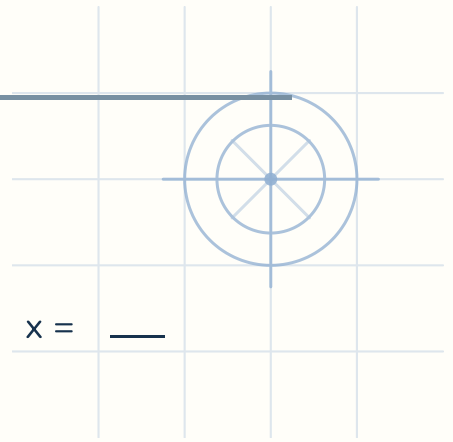


Intercepts of a line — The x-intercept

Name: _____

Date: _____

Find the x-intercept of each line.



1 $4x + y = 4$ $x =$ 1
 $4x + y = 4, y = 0$
 $4x = 4$
 $x = 1$

2 $3x + 2y = -18$ $x =$ _____

3 $x - y = -9$ $x =$ _____

4 $3x + 4y = 24$ $x =$ _____

5 $x + 9y = 9$ $x =$ _____

6 $9x + 5y = -45$ $x =$ _____

7 $8x - y = -8$ $x =$ _____

8 $4x + y = 8$ $x =$ _____

9 $x + 3y = 9$ $x =$ _____

10 $4x - 3y = -24$ $x =$ _____

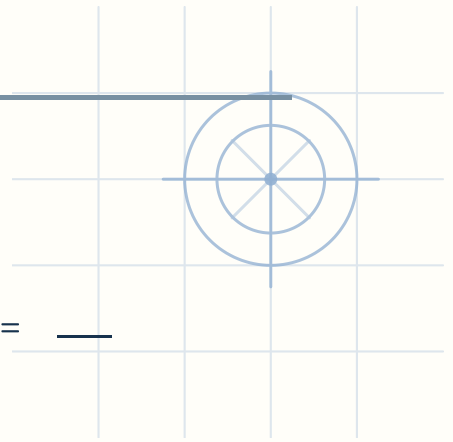


Intercepts of a line — The y-intercept

Name: _____

Date: _____

Find the y-intercept of each line.



1 $x + y = -1$ $y = \underline{-1}$
 $x + y = -1, x = 0$
 $y = -1$

2 $x - y = -9$ $y = \underline{\hspace{1cm}}$

3 $5x - 8y = -40$ $y = \underline{\hspace{1cm}}$

4 $x + y = -5$ $y = \underline{\hspace{1cm}}$

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

6 $9x + 4y = 36$ $y = \underline{\hspace{1cm}}$

7 $5x - y = 5$ $y = \underline{\hspace{1cm}}$

8 $x - 3y = 9$ $y = \underline{\hspace{1cm}}$

9 $9x + 8y = 72$ $y = \underline{\hspace{1cm}}$

10 $5x + 7y = 35$ $y = \underline{\hspace{1cm}}$

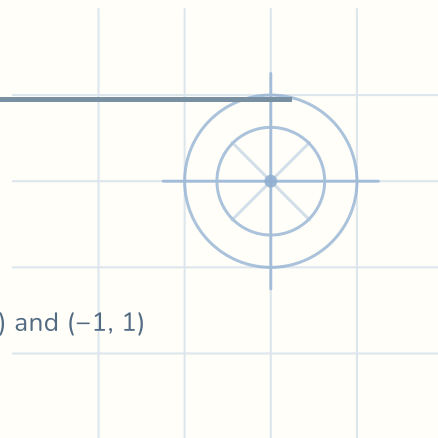


Write the equation of a line — From two points

Name: _____

Date: _____

Write the equation of each line through the two points.



1 through $(-3, -16)$ and $(-1, -10)$
slope $= (-10 - (-16)) \div (-1 - (-3))$
 $6 \div 2 = 3$
 $b = -16 - (3)(-3) = -7$
 $y = 3x - 7$

2 through $(-3, -1)$ and $(-1, 1)$

3 through $(-1, 2)$ and $(2, 11)$

4 through $(-2, 4)$ and $(1, 7)$

5 through $(1, 5)$ and $(2, 7)$

6 through $(1, 1)$ and $(3, 9)$

7 through $(1, 11)$ and $(3, 15)$

8 through $(2, -13)$ and $(4, -17)$

9 through $(-2, -2)$ and $(1, -11)$

10 through $(-3, -6)$ and $(-1, -4)$

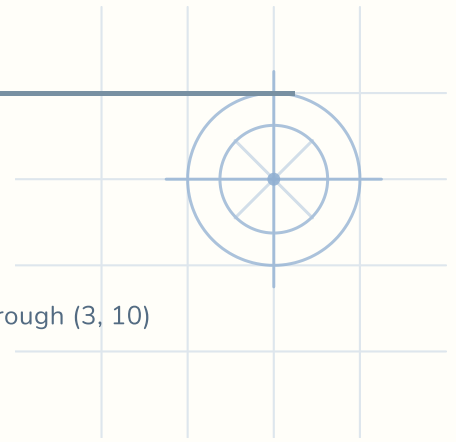


Write the equation of a line — From a slope and a point

Name: _____

Date: _____

Write the equation of each line from its slope and point.



1 with slope 2 through $(-1, 4)$
 $m = 2$
 $b = 4 - (2)(-1) = 6$
 $y = 2x + 6$

2 with slope 2 through $(3, 10)$

3 with slope 3 through $(2, 4)$

4 with slope 3 through $(-3, -6)$

5 with slope -2 through $(2, -6)$

6 with slope -2 through $(2, 1)$

7 with slope -4 through $(2, -4)$

8 with slope 2 through $(-1, 7)$

9 with slope -2 through $(-2, 10)$

10 with slope 4 through $(-1, -2)$

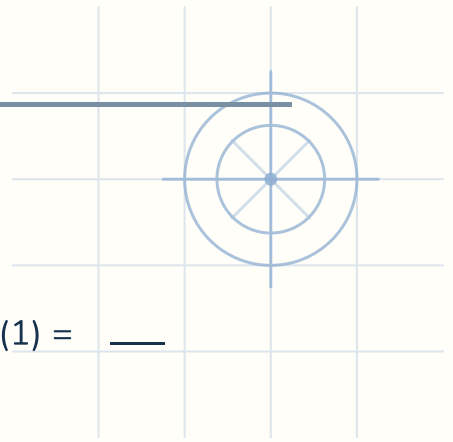


Exponential functions — Finding $f(x)$

Name: _____

Date: _____

Evaluate each exponential function at the value given.



1 $f(x) = 3 \cdot 6^x$ $f(2) =$ 108
 $f(2) = 3 \cdot 6^2$
 $6^2 = 36$
 $3 \cdot 36 = 108$

2 $f(x) = 7 \cdot 4^x$ $f(1) =$ _____

3 $f(x) = 10 \cdot 4^x$ $f(2) =$ _____

4 $f(x) = 7 \cdot 8^x$ $f(3) =$ _____

5 $f(x) = 7 \cdot 3^x$ $f(1) =$ _____

6 $f(x) = 6 \cdot 4^x$ $f(3) =$ _____

7 $f(x) = 5 \cdot 9^x$ $f(3) =$ _____

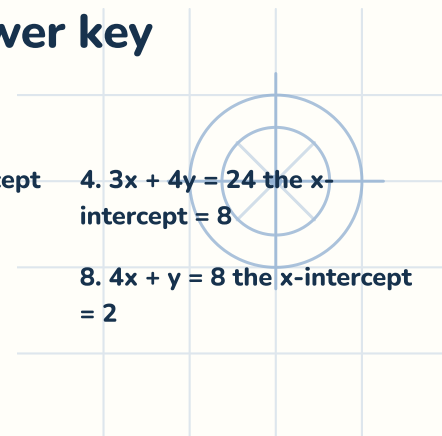
8 $f(x) = 6 \cdot 8^x$ $f(3) =$ _____

9 $f(x) = 5 \cdot 5^x$ $f(1) =$ _____

10 $f(x) = 7 \cdot 10^x$ $f(1) =$ _____



Power Pack · Lines and function graphs — Answer key



The x-intercept

1. $4x + y = 4$ the x-intercept = 1

2. $3x + 2y = -18$ the x-intercept = -6

3. $x - y = -9$ the x-intercept = -9

4. $3x + 4y = 24$ the x-intercept = 8

5. $x + 9y = 9$ the x-intercept = 9

6. $9x + 5y = -45$ the x-intercept = -5

7. $8x - y = -8$ the x-intercept = -1

8. $4x + y = 8$ the x-intercept = 2

9. $x + 3y = 9$ the x-intercept = 9

10. $4x - 3y = -24$ the x-intercept = -6

The y-intercept

1. $x + y = -1$ the y-intercept = -1

2. $x - y = -9$ the y-intercept = 9

3. $5x - 8y = -40$ the y-intercept = 5

4. $x + y = -5$ the y-intercept = -5

5. $5x + y = -5$ the y-intercept = -5

6. $9x + 4y = 36$ the y-intercept = 9

7. $5x - y = 5$ the y-intercept = -5

8. $x - 3y = 9$ the y-intercept = -3

9. $9x + 8y = 72$ the y-intercept = 9

10. $5x + 7y = 35$ the y-intercept = 5

A line from two points

1. through $(-3, -16)$ and $(-1, -10) \rightarrow y = 3x - 7$

2. through $(-3, -1)$ and $(-1, 1) \rightarrow y = x + 2$

3. through $(-1, 2)$ and $(2, 11) \rightarrow y = 3x + 5$

4. through $(-2, 4)$ and $(1, 7) \rightarrow y = x + 6$

5. through $(1, 5)$ and $(2, 7) \rightarrow y = 2x + 3$

6. through $(1, 1)$ and $(3, 9) \rightarrow y = 4x - 3$

7. through $(1, 11)$ and $(3, 15) \rightarrow y = 2x + 9$

8. through $(2, -13)$ and $(4, -17) \rightarrow y = -2x - 9$

9. through $(-2, -2)$ and $(1, -11) \rightarrow y = -3x - 8$

10. through $(-3, -6)$ and $(-1, -4) \rightarrow y = x - 3$

A line from slope and point

1. with slope 2 through $(-1, 4) \rightarrow y = 2x + 6$

2. with slope 2 through $(3, 10) \rightarrow y = 2x + 4$

3. with slope 3 through $(2, 4) \rightarrow y = 3x - 2$

4. with slope 3 through $(-3, -6) \rightarrow y = 3x + 3$

5. with slope -2 through $(2, -6) \rightarrow y = -2x - 2$

6. with slope -2 through $(2, 1) \rightarrow y = -2x + 5$

7. with slope -4 through $(2, -4) \rightarrow y = -4x + 4$

8. with slope 2 through $(-1, 7) \rightarrow y = 2x + 9$

Power Pack · Lines and function graphs — Answer key

A line from slope and point

9. with slope -2 through
 $(-2, 10) \rightarrow y = -2x + 6$

10. with slope 4 through
 $(-1, -2) \rightarrow y = 4x + 2$



Exponential functions

1. $f(x) = 3 \cdot 6^x \rightarrow f(2) = 108$

2. $f(x) = 7 \cdot 4^x \rightarrow f(1) = 28$

3. $f(x) = 10 \cdot 4^x \rightarrow f(2) = 160$

4. $f(x) = 7 \cdot 8^x \rightarrow f(3) = 3584$

5. $f(x) = 7 \cdot 3^x \rightarrow f(1) = 21$

6. $f(x) = 6 \cdot 4^x \rightarrow f(3) = 384$

7. $f(x) = 5 \cdot 9^x \rightarrow f(3) = 3645$

8. $f(x) = 6 \cdot 8^x \rightarrow f(3) = 3072$

9. $f(x) = 5 \cdot 5^x \rightarrow f(1) = 25$

10. $f(x) = 7 \cdot 10^x \rightarrow f(1) = 70$