

Entering Geometry Packet

Customary Conversions

1 foot = 12 inches

1 yard = 3 feet

1 mile = 5,280 feet

1 mile = 1,760 yards

1 cup = 8 fluid ounces

1 pint = 2 cups

1 quart = 2 pints

1 gallon = 4 quarts

1 pound = 16 ounces

1 ton = 2,000 pounds

Metric Conversions

1 meter = 100 centimeters

1 meter = 1000 millimeters

1 kilometer = 1000 meters

1 liter = 1000 milliliters

1 gram = 1000 milligrams

1 kilogram = 1000 grams

Time Conversions

1 minute = 60 seconds

1 hour = 60 minutes

1 day = 24 hours

1 year = 365 days

1 year = 52 weeks

Topics:

- 1. Linear Equations and Inequalities**
- 2. Linear Functions**
- 3. Systems of Equations**
- 4. Factoring Quadratic Expressions**

5. Operations with Fractions

Suggested websites to review these topics:

<http://virtualnerd.com/common-core/all/>

<https://www.khanacademy.org/math>

<http://www.teachertube.com/>

<http://mathisfun.com/>

1- Linear Equations and Inequalities

Suggested tutorial videos:

- [Solutions-to-linear-equations](#)
- [Solving-for-a-variable](#)
- [Solving-more-complicated-equations](#)
- [Solving Inequalities](#)

1) $3 - 2(x - 1) = 2 + 4x$

3) $\frac{2}{3} = \frac{xx+7}{3xx}$

2) $16x - 3(4x + 7) = 6x - (2x + 21)$

4) $16x + 24 = 7(x + 6)$

Solve each equation for the indicated value.

5) $ax + r = 7$, for x

6) $y = mx + 6$, for m

Solve each of the following inequalities for x .

$$7) 4x + 7 - x \leq 31$$

$$8) 2(x - 3) + 8x \leq 11$$

$$9) -7x \leq 3x + 2$$

$$10) 3x - 1 \leq 11$$

2- Linear Functions

Suggested tutorial videos:

- [Slope-intercept-form](#)
- [Slope](#)
- [Point-slope-form](#)
- [Standard-form](#)

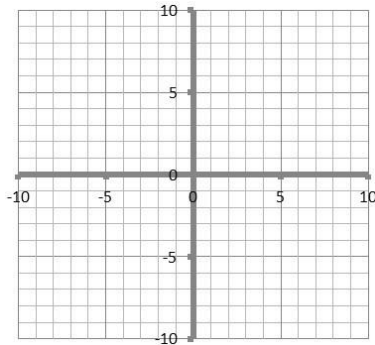
Given two points M & N on the coordinate plane, find the slope of MN , and state the slope of the line perpendicular to MN .

$$11) M(9, 6), N(1, 4)$$

$$12) M(-2, 2), N(4, -4)$$

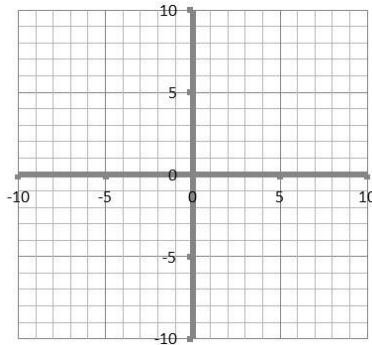
Find the x-intercept and y-intercept of the given line. Using the intercepts, graph the line.

$$13) y = x - 5$$



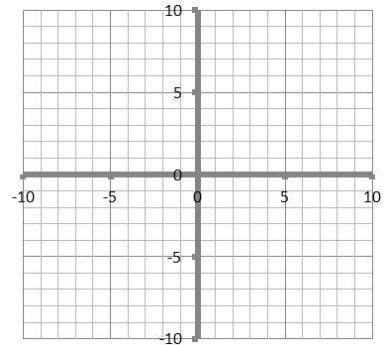
x-intercept:
y-intercept:

$$14) 6x + 2y = 12$$



x-intercept:
y-intercept:

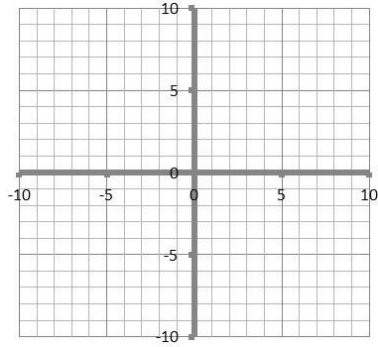
$$15) 3y = 9x + 15$$



x-intercept:
y-intercept:

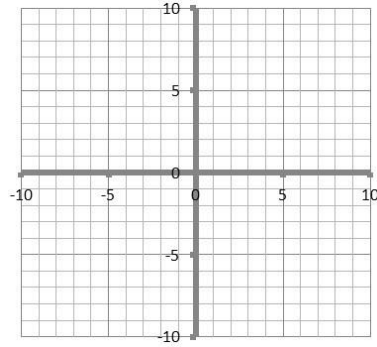
Find the slope and y-intercept of the graph of the equation. Using slope-intercept form, graph the line.

16) $y = 2x + 7$



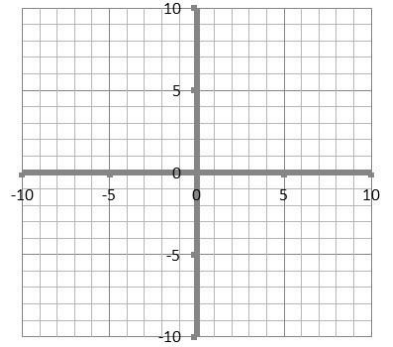
slope:
y-intercept:

17) $y = (-2/3)x + 3$



slope:
y-intercept:

18) $3x + 6y = 12$



slope:
y-intercept:

3- Systems of Equations Suggested tutorial videos:

- [Solving-linear-systems-by-graphing](#)
- [Special-types-of-systems-of-equations](#)
- [Solving-systems-by-substitution](#)
- [Solving-systems-by-elimination/combination](#)

Solve the following equations for x & y. Use any method.

19) $y = 3x - 4$

20) $2x - 3y = 13x - 4$

$x - 4y = -28$

$-3x - 2y = 0$

21) $y = 4x - 1$

$y = 2x - 5$

22) $-3x - 4y = -2$ $y = -2x - 7$

4- Factoring Quadratic Expressions

Suggested tutorial videos:

- [Factoring quadratics](#)
- [Factoring-quadratic-expressions](#)

23) $x^2 + 2x - 8$

24) $x^2 - x + 56$

25) $x^2 - 9x - 36$

5- Operations with Fractions Suggested

tutorial video:

- [Adding fractions with unlike denominators](#)

$$26) \frac{3}{4} - \frac{2}{5}$$

$$28) -$$

$$\frac{4}{5}$$

$$\frac{13}{7} - \frac{3}{2} \quad 27) +$$

$$\frac{5}{8} - \frac{1}{7}$$