

## Summer Assignment 2019

Show all work and answer the questions to the best of your ability. If you do not know how to answer a question, research how to. You will probably find instruction on Khan Academy or the website [shelovesmath.com](http://shelovesmath.com).

Again, you must show all work in order to earn credit.

Evaluate each expression.

1)  $4 \div (3 - (6 - 3 - 2))$

2)  $(2 + 1 + 7) \div 5 + 3$

3)  $1 + \frac{1}{4} + 3\frac{1}{4} + 2$

4)  $2 + 1\frac{3}{5} + \frac{4}{3} \times \frac{3}{2}$

5)  $1.3 + 2.7 + 1.3 \times 5.8$

6)  $5.1 + 1.7 - (1.7 + 3.7)$

7) List all the prime numbers between 0 and 20.

8) List all the factors of 120.

9) List the multiples of 3 that are less than 50.

10) Which factors of 120 are also multiples of 3?

Calculate

11) 15% of 130

Calculate

12) 0.2% of 56

Solve the proportion.

$$13) \frac{x}{3} = \frac{25}{2}$$

$$14) \frac{5}{8} = \frac{60}{x}$$

Find each product.

$$15) (-a - 3b)(6a + 2b)$$

$$16) (4x + 2)(-2x + 3)$$

Factor each.

$$17) x^2 - 16 = 0$$

$$18) x^2 - x - 12 = 0$$

Evaluate each function.

$$19) f(a) = \frac{1}{2}a + \frac{3}{5}; \text{ Find } f\left(\frac{1}{2}\right)$$

$$20) f(a) = a^2 + 3a; \text{ Find } f(1)$$

$$21) g(n) = |-n|; \text{ Find } g(-4)$$

$$22) h(a) = -5^{a+2} - 2; \text{ Find } h(-1)$$

Solve each system by substitution.

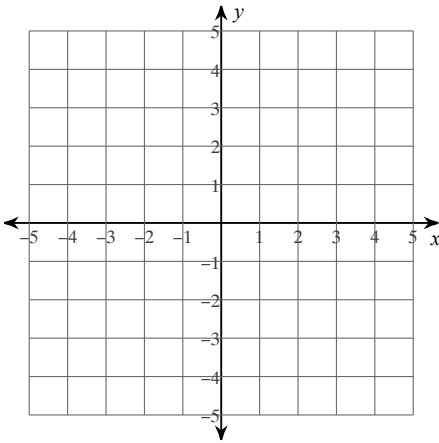
$$23) \begin{aligned} -7x + 4y &= -23 \\ y &= 2x - 6 \end{aligned}$$

Solve each system by elimination.

$$24) \begin{aligned} x - 4y &= 25 \\ -10x + 8y &= -26 \end{aligned}$$

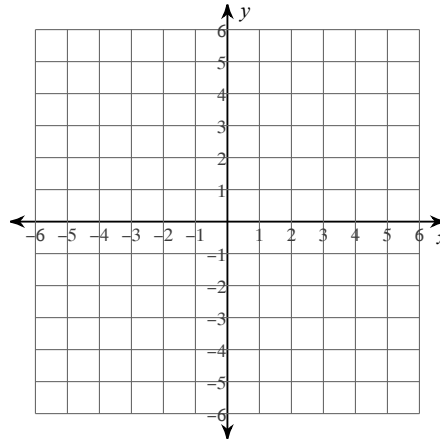
Solve each system by graphing.

$$25) \quad y = \frac{5}{2}x + 1$$
$$y = \frac{1}{2}x - 3$$



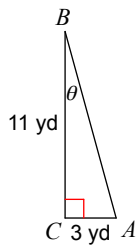
Sketch the graph of each linear inequality.

$$26) \quad y < \frac{1}{2}x - 2$$

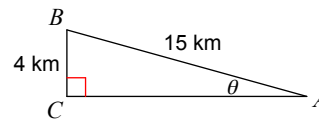


Find the length of the missing side. Round to the nearest tenth.  
(Ignore the marked angle)

27)



28)



Find the area and perimeter (or circumference for circles) of each shape described below.  
Round answers to the nearest hundredth.

29) A circle with radius 4 cm

30) A triangle with base of 5 m and height of 16 m.  
The other 2 side lengths are 20 m and 17 m.

31) A square with side length of 4 km.

32) A rectangle with length of 6 dm and width of 2 dm.

33) A right triangle with side lengths 18 mm, 24 mm, and 30 mm

Find the distance between the 2 points.  
Answer to the nearest tenth.

34) Point A (-2, 2) and Point B (5, -3)

Find the midpoint between the points given below.

35) Point A (3, 6) and Point B (1, -4)

Write the equation of the line through the given points. Write the equation in the form  $ax + by + c = 0$ , where a, b, and c are integers.

36) through: (0, -3) and (-5, -2)

Write the slope-intercept form ( $y = mx + b$ ) of the equation of the line described.

37) through: (1, 1), parallel to  $y = -2x + 1$

38) through: (-3, 0), perp. to  $y = x - 2$

Use the fact that 1000 grams = 1 kilogram to answer the next two questions.

39) 45376 grams = \_\_\_\_\_ kilograms

40) 72589 kilograms = \_\_\_\_\_ grams