

Please do all your work on a separate piece of paper. Please show all setup and work!

Find the x - and y -intercepts of the graph of the equation.

1. $6x - 3y = 12$
2. $y = 2x^2 + 13x - 7$

Use intercepts and symmetry to sketch a graph of the equation.

3. $y = |2x|$
4. $y = x^2 + 5x + 4$

Find the standard form of the equation of the specified circle.

5. Center: $(2,6)$; radius: 3
6. Endpoints of a diameter: $(1,6)$, $(3,-4)$

Solve the equations for x .

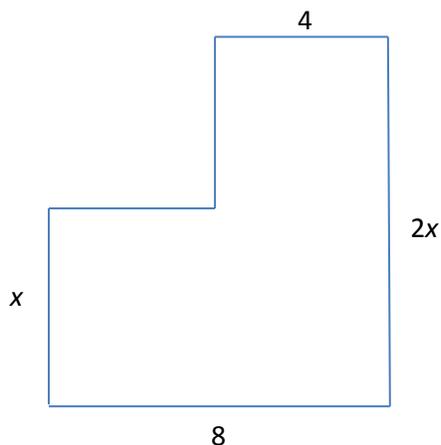
7. $3x - 4a = 6bx - 2$

Write an algebraic expression for the verbal description and simplify.

8. The sum of two consecutive natural numbers
9. The distance traveled in t hours by a car traveling at 50 miles per hour.
10. The total revenue obtained by selling x units at \$3.59 per unit.

Write an expression for the area of the region of the figure.

11.



Word problems.

12. The price of a swimming pool has been discounted 16.5%. The sale price is \$1210.75. Find the original list price of the pool.
13. The total profit for a company in February was 20% higher than it was in January. The total profit for the two months was \$157,498. Find the profit for each month.
14. Two cars start at a given point and travel in the same direction at average speeds of 40 miles per hour and 55 miles per hour. How much time must elapse before the two cars are 5 miles apart?