

- After riding her bike at 20 miles per hour, Angela got off and walked her bike the rest of the way at 5 miles per hour. If the total trip was 70 miles and took a total of 5 hours, how far did she ride and how far did she walk?
- Use the formula  $PV = nRT$  to find the pressure of 18 liters of 0.416 mole of a gas at a temperature of 600 K ( $R = 0.0821$ ).
- Heather was thinking of two numbers. The second number was 5 less than 3 times the first. Also, 10 times the first number was 5 less than 5 times the second. What two numbers was Heather thinking of?
- Graph on a number line:  $-2 < x + 2 \leq 4$ ;  $D = \{\text{Reals}\}$



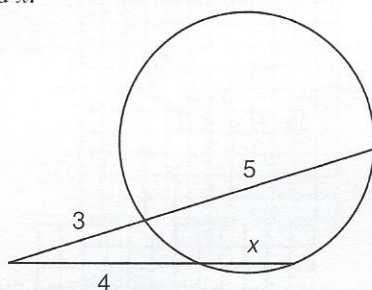
5. Solve: 
$$\begin{cases} BT_D + 5T_D = 25 \\ BT_D - 5T_D = 15 \end{cases}$$

6. Solve: 
$$\begin{cases} x - 2y + 2z = 6 \\ x + y - z = 0 \\ 3x - 2y - 2z = -2 \end{cases}$$

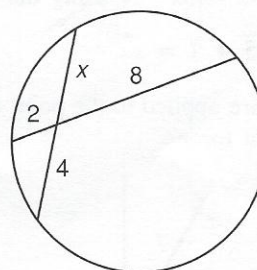
7. Solve:  $\sqrt{x} - 1 = \sqrt{x - 11}$

8. Find  $x$ .

(a)



(b)



9. (a) Add:  $3/30^\circ - 8/-240^\circ$

(b) Write  $3R - 7U$  in polar form.

10. Find the distance between  $(-8, 4)$  and  $(3, 2)$ .

11. Use unit multipliers to convert 38 square kilometers to square miles.

12. Solve  $4 - 3x = 2x^2$  by using the quadratic formula.

13. Find  $x$ :  $\frac{a}{c} - y = m\left(\frac{1}{p} + \frac{k}{x}\right)$

14. Find the equation of the line that passes through  $(-6, 1)$  and is parallel to  $3y - 4x = -9$ .

Simplify:

15.  $\frac{(a^3)^{x+y} a^{x-2y} c^{2x}}{c^{3x/2}}$

16.  $\frac{m}{1 - \frac{mp}{p + \frac{p}{m}}}$

17.  $\frac{3 + 4i}{-2i - 5}$

18.  $4i^2 - 2i + 3i^3 - \sqrt{-2}\sqrt{2} + \sqrt{-4}\sqrt{-4}$

19.  $\frac{5 + \sqrt{5}}{8 - 2\sqrt{5}}$

20.  $\sqrt[4]{4\sqrt[3]{2}}$