

3.2 Simplifying Expressions to Solve Linear Equations

1) $A = 5x + 15$

3) $\frac{1}{2}x - 4$

5) $8x + 23$

7)

a) $-c^2 + 11c - 5$

b) $-4x + 5$

c) $9 \text{ inches}^2 + 5 \text{ inches}$

d) $5x - 5$

e) $\frac{8}{3}x - 14$

9)

a) $x = \frac{19}{4} = 4.75$

b) $x = -7$

c) $x = -1.2$

d) $x = \frac{3}{4} = 0.75$

11)

a) $d_{\text{car1}} = 40t$

$$d_{\text{car2}} = 55t$$

b) $40t + 55t = 57$

c) $t = \frac{3}{5} = 0.6$

It will take 0.6 hrs (36 min) for the cars to be 57 miles apart.

13)

a) $m \ A = x$

$$m \ B = x + 10$$

$$m \ C = 2x$$

b) $x + (x + 10) + 2x = 180$

c) $x = \frac{85}{2} = 42.5 \rightarrow m \ A = 42.5^\circ$

15)

$$m \ A = 47.5^\circ$$

$$m \ B = 2(47.5^\circ) + 5^\circ = 95^\circ + 5^\circ = 100^\circ$$

$$m \ C = 47.5^\circ - 15^\circ = 32.5^\circ$$

17) $14^\circ\text{F} = -10^\circ\text{C}$.

19) -13

$$-8 + ((-1)^{19} + 6) / (9 - 10) \text{ ENTER: (Result} = -13)$$