

### Review Exercises (Ch. 3)

1)

- a)  $x = 1$
- b)  $x = -\frac{4}{5} = -0.8$
- c)  $x = -6$
- d)  $x = \frac{1}{3}$
- e)  $x = -\frac{3}{2} = -1.5$
- f)  $x = \frac{21}{2} = 11.5$
- g)  $x = 9$
- h)  $x = 21$

3)

a)

Time (hrs)	Distance (mi)
1	50
2	100
3	150
4	200
$t$	$50t$

- b)  $50t$
- c) This solution to the equation  $120 = 50t$  represents the amount of time it takes to travel 120 miles at a rate of  $50 \frac{\text{mi}}{\text{hr}}$ .
- d) It takes 1.4 hrs (1 hour 24 min) to travel 120 miles at a rate of  $50 \frac{\text{mi}}{\text{hr}}$ .

5) 9 squares are made from 28 toothpicks.

7)

- a)  $2x - 3$
- b)  $5x - 2$
- c)  $7x - 6$
- d)  $x^2 + 6x - 24$
- e)  $3x^2 + 2y$
- f)  $3x + \frac{1}{2}$
- g)  $\frac{1}{6}x$
- h)  $x + 6$

9)

- a)  $x = 8$
- b)  $x = -11$

11) The rectangle has length of 6 inches.

13)

- a) The value for  $t$  must be less than 1 hr.
- b) The distance traveled by the northbound train is  $45t$ .
- c)  $45t + 55t = 36$

- d)  $t = \frac{36}{100} = 0.36 \text{ hrs} = 21.6 \text{ min}$
- 15)
- a)  $x + x + 90 = 180$   
b)  $x = 45$   
Both unknown angles have measures of  $45^\circ$ .
- 17)
- a)  $x = 45$   
b)  $x = \frac{27}{2} = 13.5$   
c)  $x = 15$   
d)  $x = \frac{11}{5} = 2.2$
- 19) When it is  $20^\circ\text{C}$ , it is  $68^\circ\text{F}$ .
- 21) The height of the building is 21.25 ft.
- 23) There are around 103 deer in this forest. (An approximation of 100 is fine).