

Chapter 1 Quiz Review

Name KEY

Solve.

1. $2x+8=15-5x$

$7x = 7$

$x = 1$

2. $2(x-3)-4=8+5x$

$2x-6-4=8+5x$

$2x-10=8+5x$

$-3x=18$

$x = -6$

3. $\frac{1}{3}x-5=-2$

$x-15=-6$

$x = 9$

4. $\frac{5}{2}x+\frac{3}{4}=\frac{3}{8}-\frac{1}{2}x$

$20x+6=3-4x$

$\frac{24x}{24} = \frac{-3}{24}$

$x = -\frac{1}{8}$

5. $|x-4|=9$

$x-4 = -9 \quad x-4 = 9$

$x = -5 \quad x = 13$

$x = -5, 13$

6. $|8x+10|=-21$

No Solution

7. $|2x+2|-1=6$

$\frac{+1+1}{|2x+2|=7}$

$2x+2 = -7$

$\frac{2x}{2} = \frac{-9}{2}$

$x = -\frac{9}{2}$

$2x+2 = 7$

$\frac{2x}{2} = \frac{5}{2}$

$x = \frac{5}{2}$

$x = -\frac{9}{2}, \frac{5}{2}$

Solve the quadratic equation by factoring.

8. $x^2-4x-77=0$

$\hat{-11} \quad \hat{7}$

$x = 11, -7$

9. $3x^2+20=32x$

$3x^2-32x+20=0$

$\hat{60}$
 $\frac{-36-2}{3 \quad 3}$
 $\frac{-10-2}{3}$

$x = \frac{2}{3}, 10$

Solve the quadratic equation using square roots.

10. $3(x+1)^2-36=0$

$\frac{3(x+1)^2}{3} = \frac{36}{3}$

$\sqrt{(x+1)^2} = \sqrt{12}$

$x+1 = \pm 2\sqrt{3}$

$x = -1 \pm 2\sqrt{3}$

11. $(x-4)^2+4=3$

$\frac{-4-4}{(x-4)^2} = \sqrt{-1}$

$x-4 = \pm i$

$x = 4 \pm i$

Solve the quadratic equation using the quadratic formula.

12. $x^2 + 3x = 16$

$$\frac{-16 - 16}{-16 - 16}$$

$$x^2 + 3x - 16 = 0$$

$$\frac{-3 \pm \sqrt{(3)^2 - 4(1)(-16)}}{2}$$

$$x = \frac{-3 \pm \sqrt{73}}{2}$$

13. $2x^2 + 8 = -3x$

$$2x^2 + 3x + 8 = 0$$

$$\frac{-3 \pm \sqrt{(3)^2 - 4(2)(8)}}{4}$$

$$x = \frac{-3 \pm i\sqrt{55}}{4}$$

Solve the quadratic formula using any method.

14. $-4x^2 - 15x = 28$

$$-4x^2 - 15x - 28 = 0$$

$$x = \frac{15 \pm \sqrt{(-15)^2 - 4(-4)(-28)}}{-8}$$

$$x = \frac{15 \pm \sqrt{223}}{-8}$$

$$x = \frac{-15 \pm i\sqrt{223}}{8}$$

15. $3x^2 - 84 = 0$

$$\frac{3x^2}{3} = \frac{84}{3}$$

$$\sqrt{x^2} = \sqrt{28}$$

$$x = \pm 2\sqrt{7}$$

16. $6x^2 + 10x = 44$

$$\frac{-44 - 44}{-44 - 44}$$

$$6x^2 + 10x - 44 = 0$$

$$2(3x^2 + 5x - 22) = 0$$

$$\frac{-66}{3} = -22$$

$$\frac{11}{3} - 2$$

$$x = \left(\frac{-11}{3}, 2\right)$$

17. $\frac{2(x-6)^2}{2} = \frac{8}{2}$

$$\sqrt{(x-6)^2} = \sqrt{4}$$

$$x-6 = \pm 2$$

$$x = 6 \pm 2$$

$$x = 4, 8$$

Application Problems on pg. 107 #94 & 96

(94) Width = 1.8 in
Length = 4.5 in

(96) 3.3 s