

p.196 #1-10

5, 10, 6, 8, 9

$$5. (s-1)^2 (s-3)^2 = 0$$

$$s-1=0 \quad s-3=0$$

$$\boxed{s=1 \text{ dr}, 3 \text{ dr}}$$

$$6. y(y+1)^2 (y-2) = 0$$

$$\boxed{y=0, -1 \text{ dr}, 2}$$

$$8. \begin{array}{r} x^2 - 12 = 4x \\ -4x \quad -4x \end{array}$$

$$x^2 - 4x - 12 = 0$$

$$(x+2)(x-6) = 0$$

$$\boxed{x=-2, 6}$$

$$9. t^3 - t = 0$$

$$t(t^2 - 1) = 0$$

$$t(t-1)(t+1) = 0$$

$$\begin{array}{ccc} t=0 & t-1=0 & t+1=0 \\ & t=1 & t=-1 \end{array}$$

$$\boxed{t=0, 1, -1}$$

$$10. s^3 - s^2 = 0$$

$$s^2(s-1) = 0$$

$$\boxed{s=0 \text{ dr}, 1}$$

HW Assessment  
2/2

$$4. z^2(2z - 1) = 0$$

$$3r^2 = 10r + 8$$

$$-10r - 8$$

$$3r^2 - 10r - 8 = 0 \quad \cdot \begin{matrix} 2 & -4 & \cdot 3 \\ 2 & & -12 \end{matrix}$$

$$(3r + 2)(r - 4) = 0$$

check:  $3r^2 - 12r + 2r - 8$   
 $3r^2 - 10r - 8$

$$3r + 2 = 0 \quad r - 4 = 0$$

$$3r = -2$$

$$r = 4$$

$$r = -\frac{2}{3}, 4$$

$$3x^3 = 4x(2x - 1)$$

$$3x^3 = 8x^2 - 4x$$

$$-8x^2 + 4x$$

$$3x^3 - 8x^2 + 4x = 0$$

$$x(3x^2 - 8x + 4) = 0$$

$$x(3x - 2)(x - 2) = 0$$

check:  $3x^2 - 6x - 2x + 4$   
 $3x^2 - 8x + 4$

$$x = 0$$

$$3x - 2 = 0$$

$$+2$$

$$\underline{3x = 2}$$

$$3$$

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

$$x - 2 = 0$$

$$x = 2$$

$$x = 0, \frac{2}{3}, 2$$

$$(a+3)(a-3) = \underset{-40}{40}$$

$$(a+3)(a-3) - 40 = 0$$

$$a^2 - \cancel{3a} + \cancel{3a} - 9 - 40 = 0$$

$$a^2 - 49 = 0$$

$$(a+7)(a-7) = 0$$

$$a+7=0 \quad a-7=0$$

$$\boxed{a = -7, 7}$$

p. 196 # 11-20

$$11. x^3 + 4x = 4x^2$$

$$12. y^3 + 6y^2 = 27y$$

$$16. 10t^2 - 9t = 1$$

$$20. (u+3)(u-3) = 8u$$