

Assign 22

New (No calc)

Book

Pg 293: 21, 41, 45, 47, 55.

$$21. (7 + \sqrt{11y})(7 - \sqrt{11y}) \\ = \boxed{49 - 11y}$$

$$41. -3\sqrt{7}(2\sqrt{14} + 5\sqrt{2}) \\ = -6\sqrt{7 \cdot 14} - 15\sqrt{7 \cdot 2} \\ = -6 \cdot 7\sqrt{2} - 15\sqrt{14} \\ = \boxed{-42\sqrt{2} - 15\sqrt{14}}$$

$$45. (6 - \sqrt{2})(6 + \sqrt{2}) \\ = 36 - \sqrt{4} \\ = 36 - 2 \\ = \boxed{34}$$

$$47. (\sqrt{3} - \sqrt{5})^2 = (\sqrt{3} - \sqrt{5})(\sqrt{3} - \sqrt{5}) \\ = \sqrt{9} - \sqrt{15} - \sqrt{15} + \sqrt{25} \\ = 3 - 2\sqrt{15} + 5 \\ = \boxed{8 - 2\sqrt{15}}$$

$$55. \frac{\sqrt{6}}{5 + \sqrt{3}} \cdot \frac{(5 - \sqrt{3})}{(5 - \sqrt{3})} = \frac{5\sqrt{6} - \sqrt{18}}{25 - 3} = \boxed{\frac{5\sqrt{6} - 3\sqrt{2}}{22}}$$

Packet (New)

$$1. \frac{\sqrt{6}}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \boxed{\frac{\sqrt{6}}{6}}$$

$$2. \frac{3}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \boxed{\frac{3\sqrt{2}}{2}}$$

$$3. \frac{9}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{9\sqrt{3}}{3} = \boxed{3\sqrt{3}}$$

Packet (New)
cont

$$4. \frac{12}{\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{12\sqrt{3}}{3} = \boxed{4\sqrt{3}}$$

$$5. \frac{5}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \boxed{\frac{5\sqrt{2}}{2}}$$

$$6. \frac{2}{\sqrt{6}} \cdot \frac{\sqrt{6}}{\sqrt{6}} = \frac{2\sqrt{6}}{6} = \boxed{\frac{\sqrt{6}}{3}}$$

$$7. \frac{1}{2-\sqrt{3}} \cdot \frac{(2+\sqrt{3})}{(2+\sqrt{3})} = \frac{2+\sqrt{3}}{4-3} = \frac{2+\sqrt{3}}{1} = \boxed{2+\sqrt{3}}$$

$$8. \frac{2}{3-\sqrt{5}} \cdot \frac{(3+\sqrt{5})}{(3+\sqrt{5})} = \frac{6+2\sqrt{5}}{9-5} = \frac{6+2\sqrt{5}}{4} = \boxed{\frac{3+\sqrt{5}}{2}}$$

$$9. \frac{2}{\sqrt{2}+\sqrt{7}} \cdot \frac{(\sqrt{2}-\sqrt{7})}{(\sqrt{2}-\sqrt{7})} = \frac{2\sqrt{2}-2\sqrt{7}}{2-7} = \frac{2\sqrt{2}-2\sqrt{7}}{-5} = \boxed{\frac{-2\sqrt{2}+2\sqrt{7}}{5}}$$

$$10. \frac{2}{3\sqrt{12}} = \frac{2}{3\sqrt{4 \cdot 3}} = \frac{2}{6\sqrt{3}} \cdot \frac{\sqrt{3}}{\sqrt{3}} = \frac{2\sqrt{3}}{6(3)} = \frac{2\sqrt{3}}{18} = \boxed{\frac{\sqrt{3}}{9}}$$

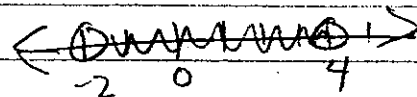
Review (No calc)

$$11. 5 \div \frac{-15}{4} = 5 \cdot \frac{4}{-15} = \boxed{\frac{7}{-3}}$$

12. Solve: $|1-y| < 3$

$$\begin{array}{l} 1-y < 3 \\ -1 \quad -1 \\ \hline = y < 2 \\ -1 \quad -1 \\ \hline y > -2 \end{array} \quad \begin{array}{l} 1-y > -3 \\ -1 \quad -1 \\ \hline -y > -4 \\ -1 \quad -1 \\ \hline y < 4 \end{array}$$

$$\boxed{-2 < y < 4}$$



Review cont

Assign 22
cont

$$13. \frac{(abc)^{-3} c^2 b}{a^{-4} b c^2 a} = \frac{a^{-3} b^{-3} c^{-3} a^2 b}{a^{-3} b c^2} = \frac{c^2 b}{b b^3 c^3 c^2} = \frac{c^2 b}{b^4 c^5} = \frac{1}{b^3 c^3}$$

$$14. \frac{s^2 y m^3}{(s^2 t)^3 m^3 s t} = \frac{s^2 y}{t^6 s t} = \frac{s y t^6}{t} = \boxed{s y t^5}$$

15. Solve on Calc: $30x - 40y - 33 = 0 \rightarrow y = \frac{33 - 30x}{-40}$
 $10x + 20y - 21 = 0 \rightarrow y = \frac{21 - 10x}{20}$

$$\boxed{(1.5, .3)}$$

~~Book~~ no Calc

pg 265: 44, 58

44. $(x^3 - y)(x^3 + y) = \boxed{x^6 - y^2}$

58. $(3b - c)^3 = (3b - c)(3b - c)(3b - c)$
 $= (9b^2 - 3bc - 3bc + c^2)(3b - c)$
 $= (9b^2 - 6bc + c^2)(3b - c)$
 $= 27b^3 - 9b^2c - 18b^2c + 6bc^2 + 3bc^2 - c^3$
 $= \boxed{27b^3 - 27b^2c + 9bc^2 - c^3}$

pg 886 (5-4): 9, 11, 13, 16-18, 21, 26

9. $2x^3 + 6x^2 + x + 3 = 2x^2(x + 3) + 1(x + 3)$
 $= \boxed{(2x^2 + 1)(x + 3)}$

11. $6x^2 + 23x + 20 = 6x^2 + 15x + 8x + 20$
 $\frac{6}{15} = \frac{8}{20} = \frac{2}{5} = 120$
 $\frac{15}{15} = \frac{8}{20} = \frac{2}{5}$
 $= 3x(2x + 5) + 4(2x + 5)$
 $= \boxed{(2x + 5)(3x + 4)}$

pg 886 cont

$$\begin{aligned}
 13. \quad 6p^2 - 13pq - 28q^2 &= (6p^2 + 8pq - 2pq - 28q^2) \\
 &= 2p(3p + 4q) - 7q(3p + 4q) \\
 &= \boxed{(2p - 7q)(3p + 4q)}
 \end{aligned}$$

$$16. \quad 9x^2 - 64 = \boxed{(3x - 8)(3x + 8)}$$

$$17. \quad 9 - t^{10} = \boxed{(3 - t^5)(9 + t^5)}$$

$$18. \quad x^2 + 16 = \boxed{\text{prime}}$$

$$\begin{aligned}
 21. \quad x^3 - 8x^2 + 15x &= x(x^2 - 8x + 15) \\
 &= \boxed{x(x - 5)(x - 3)}
 \end{aligned}$$

$$\begin{aligned}
 26. \quad 35ac - 3bd - 7ad + 15bc \\
 &= 35ac - 7ad + 15bc - 3bd \\
 &= 7a(5c - d) + 3b(5c - d) \\
 &= \boxed{(7a + 3b)(5c - d)}
 \end{aligned}$$

Pg 285: 12, 34, 42, 48, 54

$$12. \quad \sqrt[4]{-10000} = \boxed{\text{no real root}}$$

$$34. \quad -\sqrt{121} = \boxed{-11}$$

$$42. \quad \sqrt[4]{t^8} = \boxed{t^2}$$

$$48. \quad \sqrt[3]{8b^3c^3} = \boxed{2bc}$$

$$54. \quad \sqrt{x^2 + 6x + 9} = \sqrt{(x+3)^2} = \boxed{x+3}$$

Review cont

Assign 22 cont

pg 293: 10, 18, 24, 36, 44.

10. $4\sqrt{64} = 4\sqrt{9 \cdot 6} = \boxed{12\sqrt{6}}$

18. $\sqrt{2} + 5\sqrt{2} + 7\sqrt{2} - 4\sqrt{2} = \boxed{8\sqrt{2} + 3\sqrt{2}}$

24. $5\sqrt{50} = 5\sqrt{25 \cdot 2} = \boxed{25\sqrt{2}}$

36. $\sqrt{26} \cdot \sqrt{39} \cdot \sqrt{14} = \sqrt{2 \cdot 13 \cdot 3 \cdot 13 \cdot 7 \cdot 2} = 2 \cdot 13 \sqrt{3 \cdot 7} = \boxed{26\sqrt{21}}$

44. $5\sqrt{20} + \sqrt{24} - \sqrt{180} + 7\sqrt{54} = 10\sqrt{5} + 2\sqrt{6} + 6\sqrt{5} + 21\sqrt{6} = \boxed{4\sqrt{5} + 23\sqrt{6}}$

