

Quiz Review

11 - 1 thru 11 - 3

1. $\sqrt{24}$ $(2\sqrt{6})$

$2 \swarrow \textcircled{4} \nearrow 6$

2. $4\sqrt{75}$ $(20\sqrt{3})$

$5 \swarrow \textcircled{25} \nearrow 3$

3. $\sqrt{63x^2y^5z}$

$3\sqrt{7} \hat{9} \hat{y^4} y$

$3xy^2\sqrt{7yz}$

4. $\sqrt{\frac{12}{5}}$

$\frac{\sqrt{12}}{\sqrt{5}} \cdot \frac{\sqrt{5}}{\sqrt{5}} = \frac{\sqrt{60}}{5}$

$\frac{2\sqrt{15}}{5}$

5.

$$\frac{8}{3 - \sqrt{2}} \cdot \frac{3 + \sqrt{2}}{3 + \sqrt{2}}$$

$$\frac{24 + 8\sqrt{2}}{9 - 2}$$

$$\frac{24 + 8\sqrt{2}}{7}$$

6.

$$5\sqrt{2} + 4\sqrt{2} - 3\sqrt{3} + \sqrt{2}$$

$$10\sqrt{2} - 3\sqrt{3}$$

$$\begin{array}{rcl}
 7. & 6\sqrt{27} & + 8\sqrt{12} + 2\sqrt{75} \\
 & \begin{array}{c} 3\sqrt{9} \cdot 3 \\ 18\sqrt{3} \end{array} & \begin{array}{c} 2\sqrt{4} \cdot 3 \\ 10\sqrt{3} \end{array} + \begin{array}{c} 5\sqrt{25} \cdot 3 \\ 10\sqrt{3} \end{array} \\
 & \underline{18\sqrt{3}} & + \underline{10\sqrt{3}} + \underline{10\sqrt{3}}
 \end{array}$$

$$44\sqrt{3}$$

$$8. \quad \sqrt{6} (\sqrt{10} + \sqrt{15})$$

$$\begin{array}{c}
 \sqrt{60} + \sqrt{90} \\
 \begin{array}{c} 2\sqrt{15} \\ 2\sqrt{4} \cdot 3 \end{array} \quad \begin{array}{c} 3\sqrt{10} \\ 3\sqrt{9} \cdot 10 \end{array}
 \end{array}$$

$$2\sqrt{15} + 3\sqrt{10}$$

$$9. (\sqrt{10} + \sqrt{6})(\sqrt{30} - \sqrt{18})$$

$$\sqrt{300} - \cancel{\sqrt{180}} + \cancel{\sqrt{180}} - \sqrt{108}$$

$10 \sqrt{\textcircled{100}^3}$
 $6 \sqrt{\textcircled{36}^3}$

$$10\sqrt{3} - 6\sqrt{3}$$

$$\textcircled{4\sqrt{3}}$$

10. $\sqrt{2x + 15} + \cancel{5} = \cancel{-5}^{18}$

$$\sqrt{2x+15} = 13^2$$

$$2x + \cancel{15} = 169$$
$$\quad \quad \quad \cancel{-15} \quad -15$$

$$\frac{2x}{\cancel{2}} = \frac{154}{2}$$

$$x = 77$$

11. $\sqrt{5x-4} - 1 = \frac{8}{x-3}$

$5 = 5 \checkmark$
 $0 = -2 \text{ no}$

$$\sqrt{5x-4} = (x-2)^2$$

$$5x-4 = x^2-4x+4$$

$$-5x+4 \quad -5x+4$$

$$0 = x^2 - 9x + 8$$

$$0 = (x-8)(x-1)$$

$$x=8 \quad x \neq 1$$

FOIL.

$$(x-2)(x-2)$$

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

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