

"Totally Radical" movie night

$$\begin{aligned} 1.) & 3\sqrt{245} \\ & 3\sqrt{\cancel{49} \cdot 5} \\ & 3 \cdot 7\sqrt{5} \\ & \boxed{21\sqrt{5}} \end{aligned}$$

$$\begin{aligned} 5.) & 3\sqrt{50} - 5\sqrt{18} \\ & 3\sqrt{\cancel{25} \cdot 2} - 5\sqrt{\cancel{9} \cdot 2} \\ & 3 \cdot 5\sqrt{2} - 5 \cdot 3\sqrt{2} \\ & 15\sqrt{2} - 15\sqrt{2} \\ & \boxed{0} \end{aligned}$$

$$\begin{aligned} 2.) & \sqrt{108m^8} \\ & m^4\sqrt{\cancel{36} \cdot 3} \\ & \boxed{6m^4\sqrt{3}} \end{aligned}$$

$$\begin{aligned} 3.) & \sqrt{150x^4y^7} \\ & x^2\sqrt{\cancel{25} \cdot 6y^6y^1} \\ & x^2 \cdot 5y^3\sqrt{6y} \\ & \boxed{5x^2y^3\sqrt{6y}} \end{aligned}$$

$$\begin{aligned} 4.) & -2\sqrt{28} + \frac{1}{4}\sqrt{112} \\ & -2\sqrt{\cancel{4} \cdot 7} + \frac{1}{4}\sqrt{\cancel{16} \cdot 7} \\ & -2 \cdot 2\sqrt{7} + \frac{1}{4} \cdot 4\sqrt{7} \\ & -4\sqrt{7} + 1\sqrt{7} \\ & \boxed{-3\sqrt{7}} \end{aligned}$$

$$\begin{aligned}
 6.) & \sqrt{45} - 2\sqrt{27} + 7\sqrt{80} \\
 & \sqrt{\cancel{9}15} - 2\sqrt{\cancel{9}3} + 7\sqrt{\cancel{16}5} \\
 & 3\sqrt{5} - 2 \cdot 3\sqrt{3} + 7 \cdot 4\sqrt{5} \\
 & 3\sqrt{5} - 6\sqrt{3} + 28\sqrt{5} \\
 & \boxed{31\sqrt{5} - 6\sqrt{3}}
 \end{aligned}$$

$$\begin{aligned}
 7.) & -5\sqrt{12} + 3\sqrt{48} \\
 & -5\sqrt{\cancel{4}3} + 3\sqrt{\cancel{16}3} \\
 & -5 \cdot 2\sqrt{3} + 3 \cdot 4\sqrt{3} \\
 & -10\sqrt{3} + 12\sqrt{3} \\
 & \boxed{2\sqrt{3}}
 \end{aligned}$$

$$\begin{aligned}
 8.) & -12\sqrt{24} + \frac{1}{2}\sqrt{96} \\
 & -12\sqrt{\cancel{4}6} + \frac{1}{2}\sqrt{\cancel{16}6} \\
 & -12 \cdot 2\sqrt{6} + \frac{1}{2} \cdot \frac{4}{2}\sqrt{6} \\
 & -24\sqrt{6} + 2\sqrt{6} \\
 & \boxed{-22\sqrt{6}}
 \end{aligned}$$