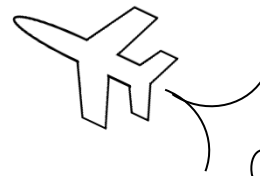


MAth on the Fly!



NAME: _____ DATE: _____

Adding and Subtracting Radicals

Simplify each expression.

1. $2\sqrt{7} + \sqrt{7} + 3\sqrt{7}$

2. $-5\sqrt{6} + 4\sqrt{6} - \sqrt{6}$

3. $2\sqrt{5} + 2\sqrt{3} - 7\sqrt{5}$

4. $9\sqrt{2} - 3\sqrt{2} - 3\sqrt{7}$

5. $6\sqrt{2} + \sqrt{50}$

6. $\sqrt{27} - 7\sqrt{3}$

7. $\sqrt{20} - \sqrt{40} + \sqrt{45}$

8. $9\sqrt{8} - 3\sqrt{2} - 2\sqrt{18}$

9. $\sqrt{75} + 4\sqrt{12} + \sqrt{48}$

10. $5\sqrt{28} + \sqrt{54} - \sqrt{24}$

SOLUTIONS

$$\begin{aligned} \boxed{1.} \quad & 2\sqrt{7} + 1\sqrt{7} + 3\sqrt{7} \\ & = 6\sqrt{7} \end{aligned}$$

$$\begin{aligned} \boxed{2.} \quad & -5\sqrt{6} + 4\sqrt{6} - 1\sqrt{6} \\ & = -2\sqrt{6} \end{aligned}$$

$$\begin{aligned} \boxed{3.} \quad & 2\sqrt{5} + 2\sqrt{3} - 7\sqrt{5} \\ & = 2\sqrt{3} - 5\sqrt{5} \end{aligned}$$

$$\begin{aligned} \boxed{4.} \quad & 9\sqrt{2} - 3\sqrt{2} - 3\sqrt{7} \\ & = 6\sqrt{2} - 3\sqrt{7} \end{aligned}$$

$$\begin{aligned} \boxed{5.} \quad & 6\sqrt{2} + 5\sqrt{2} \\ & = 11\sqrt{2} \end{aligned}$$

$$\begin{aligned} \boxed{6.} \quad & 3\sqrt{3} - 7\sqrt{3} \\ & = -4\sqrt{3} \end{aligned}$$

$$\begin{aligned} \boxed{7.} \quad & 2\sqrt{5} - 2\sqrt{10} + 3\sqrt{5} \\ & = 5\sqrt{5} - 2\sqrt{10} \end{aligned}$$

$$\begin{aligned} \boxed{8.} \quad & 18\sqrt{2} - 3\sqrt{2} - 6\sqrt{2} \\ & = 9\sqrt{2} \end{aligned}$$

$$\begin{aligned} \boxed{9.} \quad & 5\sqrt{3} + 8\sqrt{3} + 4\sqrt{3} \\ & = 17\sqrt{3} \end{aligned}$$

$$\begin{aligned} \boxed{10.} \quad & 10\sqrt{7} + 3\sqrt{6} - 2\sqrt{6} \\ & = \sqrt{6} + 10\sqrt{7} \end{aligned}$$