

M20-2 Discovery Activity - Adding and Subtracting Radicals

If these are true and these are false.

$$3\sqrt{5} + 6\sqrt{5} = 9\sqrt{5}$$

$$3\sqrt{5} + 6\sqrt{5} = 9\sqrt{10}$$

$$8\sqrt{7} - 3\sqrt{7} = 5\sqrt{7}$$

$$8\sqrt{7} - 3\sqrt{7} = 5\sqrt{0}$$

$$\sqrt{13} + 5\sqrt{13} = 6\sqrt{13}$$

$$\sqrt{13} + 5\sqrt{13} = 5\sqrt{13}$$

$$\begin{aligned}\sqrt{8} + 3\sqrt{2} &= 2\sqrt{2} + 3\sqrt{2} \\ &= 5\sqrt{2}\end{aligned}$$

$$\sqrt{8} + 3\sqrt{2} = 4\sqrt{10}$$

$$\begin{aligned}\sqrt{27} + \sqrt{12} &= 3\sqrt{3} + 2\sqrt{3} \\ &= 5\sqrt{3}\end{aligned}$$

$$\begin{aligned}\sqrt{27} + \sqrt{12} &= 9\sqrt{3} + 4\sqrt{3} \\ &= 13\sqrt{3}\end{aligned}$$

then find the answer to these:

$$4\sqrt{11} + \sqrt{11} =$$

$$20\sqrt{13} - 10\sqrt{13} =$$

$$\sqrt{8} + \sqrt{18} =$$

$$2\sqrt{12} + \sqrt{48} =$$

(Hint: Think about
addition &
subtraction of
polynomials.)

... and now see if you can do these!

$$3\sqrt{27} - 5\sqrt{12} + \sqrt{75} =$$

$$7\sqrt{5} + \sqrt{3} =$$

$$4\sqrt{x} + 3\sqrt{x} - 5\sqrt{x} =$$

$$3\sqrt{x^3} + x\sqrt{x} + \sqrt{3} =$$