

Multiplying Radicals: Day 3

Note Title

15/11/2017

I Follow the rule:

$$(m\sqrt[k]{a})(n\sqrt[k]{b}) = mn\sqrt[k]{ab}$$

with numbers you will need to simplify

e.g. 1 $\sqrt{3} \cdot \sqrt{6} = \sqrt{18}$
 $3\sqrt{2}$ ALWAYS SIMPLIFY !!

e.g. 2 $2\sqrt{6} \cdot 6\sqrt{7} = 12\sqrt{42}$

e.g. 3 $\sqrt{7} \cdot \sqrt{7} = 7$

Mixed operations "bombing"

e.g. 4 $3\sqrt{2}(\sqrt{6} - 5\sqrt{8})$ "Distribute"

$$3\sqrt{12} - 15\sqrt{16}$$

$$6\sqrt{3} - 15(4)$$

$$6\sqrt{3} - 60$$

e.g. 5 $(3\sqrt{5} - \sqrt{2})(\sqrt{5} + 4\sqrt{2})$ FOIL

$$3\sqrt{25} + 12\sqrt{10} - \sqrt{10} - 4\sqrt{4}$$

$$15 + 11\sqrt{10} - 8$$

$$7 + 11\sqrt{10}$$

TRY THESE

a) $2\sqrt{5}(2\sqrt{2} - 5\sqrt{8})$

$$4\sqrt{10} - 10\sqrt{40}$$

$$4\sqrt{10} - 20\sqrt{10}$$

$$-16\sqrt{10}$$

b) $(5\sqrt{3} + 1)(2\sqrt{3} - 4)$ FOIL

$$10\sqrt{9} - 20\sqrt{3} + 2\sqrt{3} - 4$$

$$30 - 18\sqrt{3} - 4$$

$$26 - 18\sqrt{3}$$

