

MULTIPLY THE COEFFICIENTS AND THE RADICALS SEPARATELY!

$$1.) \sqrt{3} \cdot \sqrt{3} = \sqrt{9} = \boxed{3}$$

$$2.) \sqrt{15} \cdot \sqrt{15} = \boxed{15}$$

$$3.) \sqrt{2} \cdot \sqrt{3} = \boxed{\sqrt{6}}$$

$$4.) \sqrt{3} \cdot \sqrt{5} = \boxed{\sqrt{15}}$$

$$5.) \sqrt{20} \cdot \sqrt{6} = \sqrt{120}$$

20 6
 ^ ^
4 5 2 3
 ^ ^
2 2

$$2\sqrt{5 \cdot 2 \cdot 3}$$
$$\boxed{2\sqrt{30}}$$

$$6.) \sqrt{15} \cdot \sqrt{5} = \sqrt{75}$$

3 25
 ^ ^
5 5

$$\boxed{5\sqrt{3}}$$

$$7.) 2\sqrt{2} \cdot 5\sqrt{3}$$
$$\boxed{10\sqrt{6}}$$

$$8.) 5\sqrt{5} \cdot 4\sqrt{3}$$
$$\boxed{20\sqrt{15}}$$

Try it!

$$9.) \sqrt{5} \cdot \sqrt{10} = \sqrt{50}$$

5 10
 ^ ^
5 2

$$\boxed{5\sqrt{2}}$$

$$10.) \sqrt{12} \cdot \sqrt{5} = \sqrt{60}$$

12 5
 ^ ^
3 4
 ^ ^
2 2

$$\boxed{2\sqrt{15}}$$

$$11.) 9\sqrt{2} \cdot 9\sqrt{2}$$

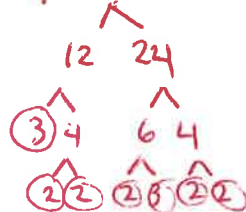
$$81\sqrt{4}$$

$$81(2)$$

$$\boxed{162}$$

$$12.) 3\sqrt{12} \cdot 4\sqrt{24}$$

$$12\sqrt{288}$$



$$12 \cdot 2 \cdot 2 \cdot 3\sqrt{2}$$

$$\boxed{144\sqrt{2}}$$

LET'S DISTRIBUTE!

$$13.) \sqrt{2}(4 + \sqrt{3})$$

$$\boxed{4\sqrt{2} + \sqrt{6}}$$

$$14.) \sqrt{3}(5 + \sqrt{5})$$

$$\boxed{5\sqrt{3} + \sqrt{15}}$$

$$15.) 2\sqrt{3}(14 - 2\sqrt{3})$$

$$28\sqrt{3} - 4\sqrt{9}$$

$$28\sqrt{3} - 4(3)$$

$$\boxed{28\sqrt{3} - 12}$$

$$16.) 5\sqrt{2}(5 + 3\sqrt{2})$$

$$25\sqrt{2} + 15\sqrt{4}$$

$$25\sqrt{2} + 15(2)$$

$$\boxed{25\sqrt{2} + 30}$$

$$17.) 6\sqrt{3}(4\sqrt{5} + \sqrt{2})$$

$$24\sqrt{15} + 6\sqrt{6}$$

$$18.) 2\sqrt{15}(4\sqrt{2} + 7\sqrt{3})$$

$$8\sqrt{30} + 14\sqrt{45}$$

\wedge
 $9 \ 5$
 \wedge
 $3 \ 3$

$$8\sqrt{30} + 14 \cdot 3\sqrt{5}$$

$$8\sqrt{30} + 42\sqrt{5}$$

Try it!

$$19.) \sqrt{5}(10 + 2\sqrt{20})$$

$$10\sqrt{5} + 2\sqrt{100}$$

$$10\sqrt{5} + 2(10)$$

$$10\sqrt{5} + 20$$

$$20.) \sqrt{10}(9 + 3\sqrt{3})$$

$$9\sqrt{10} + 3\sqrt{30}$$

$$21.) 2\sqrt{2}(8 + \sqrt{10})$$

$$16\sqrt{2} + 2\sqrt{20}$$

\wedge
 $2 \ 10$
 \wedge
 $2 \ 5$

$$16\sqrt{2} + 2 \cdot 2\sqrt{5}$$

$$16\sqrt{2} + 4\sqrt{5}$$

$$22.) 7\sqrt{8}(4 - \sqrt{3})$$

$$28\sqrt{8} - 7\sqrt{24}$$

\wedge
 $2 \ 4$
 \wedge
 $2 \ 2$
 \downarrow
 \wedge
 $2 \ 12$
 \wedge
 $2 \ 4$
 \wedge
 $2 \ 3$

$$28 \cdot 2\sqrt{2} - 7 \cdot 2\sqrt{6}$$

$$56\sqrt{2} - 14\sqrt{6}$$

