

Math 2 Unit 3.1 & 3.2 Practice Quiz

Simplify.

1) $7\sqrt{112m^2n^3}$

2) $2\sqrt[4]{243a^7b^7c^5}$

3) $2\sqrt{12} + 3\sqrt{27} - 2\sqrt{2}$

4) $-2\sqrt{18} - \sqrt{3} - 2\sqrt{5} + 2\sqrt{18}$

5) $-\sqrt[3]{-135} + 2\sqrt[3]{135}$

6) $-3\sqrt[4]{243} + 2\sqrt[4]{32} - 3\sqrt[4]{2} + 3\sqrt{8}$

$$7) \sqrt{4} \cdot \sqrt{8}$$

$$8) \sqrt[3]{10} \cdot \sqrt[3]{25}$$

$$9) -4\sqrt{10}(4 + 4\sqrt{5})$$

$$10) -3\sqrt{3}(-4\sqrt{2n} + 3\sqrt{10})$$

$$11) -4\sqrt{5k}(2 - \sqrt{10k})$$

$$12) -5\sqrt{6r}(4r^2 + 3\sqrt{2})$$

$$13) (3\sqrt{3x} + 5\sqrt{5x})(-5\sqrt{2x} - 2\sqrt{5x})$$

$$14) (5\sqrt{2p} - 2\sqrt{5})(-5\sqrt{2p} - 4\sqrt{5})$$

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Simplify.

$$1) 7\sqrt{112m^2n^3}$$
$$28mn\sqrt{7n}$$

$$2) 2\sqrt[4]{243a^7b^7c^5}$$
$$6abc\sqrt[4]{3a^3b^3c}$$

$$3) 2\sqrt{12} + 3\sqrt{27} - 2\sqrt{2}$$
$$13\sqrt{3} - 2\sqrt{2}$$

$$4) -2\sqrt{18} - \sqrt{3} - 2\sqrt{5} + 2\sqrt{18}$$
$$-\sqrt{3} - 2\sqrt{5}$$

$$5) -\sqrt[3]{-135} + 2\sqrt[3]{135}$$
$$9\sqrt[3]{5}$$

$$6) -3\sqrt[4]{243} + 2\sqrt[4]{32} - 3\sqrt[4]{2} + 3\sqrt{8}$$
$$-9\sqrt[4]{3} + \sqrt[4]{2} + 6\sqrt{2}$$

$$7) \sqrt{4} \cdot \sqrt{8}$$
$$4\sqrt{2}$$

$$8) \sqrt[3]{10} \cdot \sqrt[3]{25}$$
$$5\sqrt[3]{2}$$

$$9) -4\sqrt{10}(4 + 4\sqrt{5})$$
$$-16\sqrt{10} - 80\sqrt{2}$$

$$10) -3\sqrt{3}(-4\sqrt{2n} + 3\sqrt{10})$$
$$12\sqrt{6n} - 9\sqrt{30}$$

$$11) -4\sqrt{5k}(2 - \sqrt{10k})$$
$$-8\sqrt{5k} + 20k\sqrt{2}$$

$$12) -5\sqrt{6r}(4r^2 + 3\sqrt{2})$$
$$-20r^2\sqrt{6r} - 30\sqrt{3r}$$

$$13) (3\sqrt{3x} + 5\sqrt{5x})(-5\sqrt{2x} - 2\sqrt{5x})$$
$$-15x\sqrt{6} - 6x\sqrt{15} - 25x\sqrt{10} - 50x$$

$$14) (5\sqrt{2p} - 2\sqrt{5})(-5\sqrt{2p} - 4\sqrt{5})$$
$$-50p - 10\sqrt{10p} + 40$$