



Math worksheet on 'Radicals - Cube - Simplifying from Factors, Values and Variables, Radical Remaining (Level 3)'. Part of a broader unit on 'Radicals - Simplifying Advanced'

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1

Simplify the radical

$$\sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot r \cdot r \cdot p}$$

a

$$5r\sqrt{p}$$

b

$$7r\sqrt{p^2}$$

c

$$4r\sqrt{2p}$$

d

$$2r\sqrt{p}$$

e

$$5r\sqrt{p^2}$$

f

$$2r^2\sqrt{p^2}$$

2

$$\sqrt{2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot z \cdot z \cdot z \cdot z \cdot x \cdot x \cdot x}$$

Simplify the radical

a

$$7z^2x\sqrt{2x^2}$$

b

$$2zx\sqrt{x^3}$$

c

$$z^4x\sqrt{5x^3}$$

d

$$5zx\sqrt{x}$$

e

$$4z^2x\sqrt{2x}$$

f

$$2zx\sqrt{5x}$$

3

Simplify the radical

$$\sqrt{2 \cdot 2 \cdot 2 \cdot n \cdot b}$$

a

$$2\sqrt{2n^2b^3}$$

b

$$\sqrt{n^2b}$$

c

$$\sqrt{nb}$$

d

$$3\sqrt{5nb}$$

e

$$2\sqrt{4n^3b}$$

f

$$2\sqrt{2nb}$$

4

$$\sqrt{3 \cdot 3 \cdot 11 \cdot x \cdot x \cdot x \cdot m \cdot m \cdot m \cdot m \cdot m}$$

Simplify the radical

a

$$3xm\sqrt{10xm}$$

b

$$x^3m^3\sqrt{11x^2m}$$

c

$$2xm^3\sqrt{8x^2m^2}$$

d

$$3xm^2\sqrt{11xm}$$

e

$$xm^2\sqrt{10x^2m}$$

f

$$2xm^4\sqrt{13xm^3}$$

5

$$\sqrt{2 \cdot 5 \cdot 5 \cdot r \cdot r \cdot r \cdot r \cdot m \cdot m \cdot m}$$

Simplify the radical

a

$$5rm\sqrt{2m}$$

b

$$4r^2m\sqrt{4m^2}$$

c

$$3rm^3\sqrt{m}$$

d

$$3rm\sqrt{5m}$$

e

$$5r^2m\sqrt{2m}$$

f

$$5r^4m\sqrt{m^3}$$

6

Simplify the radical

$$\sqrt{2 \cdot 2 \cdot 5 \cdot p \cdot p \cdot b \cdot b \cdot b \cdot b \cdot b}$$

a

$$4pb\sqrt{2b}$$

b

$$5p^2b^4\sqrt{b}$$

c

$$2pb^2\sqrt{5b}$$

d

$$3p^3b\sqrt{6b}$$

e

$$p^3b\sqrt{6b^2}$$

f

$$4p^3b^2\sqrt{3b^3}$$

7

Simplify the radical

$$\sqrt{3 \cdot 3 \cdot 3 \cdot n \cdot n \cdot n \cdot p \cdot p \cdot p}$$

a

$$n^2p\sqrt{np}$$

b

$$n^2p\sqrt{3np^3}$$

c

$$3np\sqrt{3np}$$

d

$$2n^3p^2\sqrt{n^2p}$$

e

$$4np^2\sqrt{2n^2p^3}$$

f

$$3n^2p^2\sqrt{3np^3}$$