Math worksheet on *'Radicals - Cube - Simplify From Cubed 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

$$\sqrt{2^2 \cdot 2^2 \cdot 11 \cdot p^2 \cdot m^2 \cdot}$$

a	$7pm^2\sqrt{9}$	**b**	$p^3m\sqrt{8}$
c	$2pm^3\sqrt{12}$	**d**	$p^2m\sqrt{10}$
e	$4pm\sqrt{11}$	**f**	$5pm\sqrt{11}$

2 Simplify the radical

$$\sqrt{2^2 \cdot 2^2 \cdot 3 \cdot c^2 \cdot c \cdot y \cdot}$$

a	$3c\sqrt{5cy}$	**b**	$3c\sqrt{5cy^3}$
c	$4c\sqrt{3cy}$	**d**	$6c\sqrt{2c^3y}$
e	$c^2\sqrt{6cy^2}$	**f**	$c\sqrt{6cy^2}$

3 Simplify the radical

$$\sqrt{2^2 \cdot 2^2 \cdot 3 \cdot c^2 \cdot c^2 \cdot p^2 \cdot}$$

a	**b**	**c**	**d**	**e**	**f**
c^3p^2	$4c^2p\sqrt{3}$	$3c^3p\sqrt{2}$	$6c^4p^3\sqrt{3}$	$3cp$	$6c^4p$

4 Simplify the radical

$$\sqrt{2^2 \cdot 11 \cdot r^2 \cdot r \cdot x \cdot}$$

a	$5r\sqrt{10rx^3}$	**b**	$3r\sqrt{14r^3x}$
c	$2r\sqrt{11rx}$	**d**	$r\sqrt{14rx}$
e	$r\sqrt{7rx^3}$	**f**	$r^3\sqrt{8rx}$

5 Simplify the radical

$$\sqrt{3^2 \cdot 5 \cdot x^2 \cdot p^2 \cdot}$$

a	**b**	**c**	**d**	**e**	**f**
$xp^2\sqrt{7}$	$3xp\sqrt{5}$	$3xp^2\sqrt{2}$	$2x^3p\sqrt{3}$	$x^3p^2\sqrt{7}$	$x^3p\sqrt{4}$

6 Simplify the radical

$$\sqrt{2 \cdot 3^2 \cdot z^2 \cdot z \cdot d^2 \cdot d \cdot}$$

a	$6z^2d\sqrt{zd}$	**b**	$4zd^2\sqrt{2zd^2}$
c	$3zd\sqrt{2zd}$	**d**	$6zd\sqrt{z^2d^3}$
e	$6z^2d^3\sqrt{z^2d^3}$	**f**	$3zd^3\sqrt{2z^3d}$

7 Simplify the radical

$$\sqrt{2^2 \cdot 7 \cdot d^2 \cdot y^2 \cdot y \cdot}$$

a	$2d^2y\sqrt{6y^3}$	**b**	$2dy\sqrt{7y}$
c	$3d^3y\sqrt{8y}$	**d**	$dy^2\sqrt{6y}$
e	$dy\sqrt{5y}$	**f**	$5dy\sqrt{4y^2}$