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

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

a	b	c	d	e	f
p^2r^4	$2pr^2\sqrt{3}$	$4p^3r\sqrt{5}$	$pr\sqrt{4}$	$2pr^4\sqrt{3}$	$3pr^3\sqrt{5}$

2 Simplify the radical

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

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

3 Simplify the radical

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

a		b	
$zb\sqrt{6b}$		$4z^2b\sqrt{3b}$	
c	$4zb\sqrt{4b^3}$	d	$6z^2b^2\sqrt{3b^2}$
e	$7z^4b\sqrt{b}$	f	$2zb\sqrt{2b}$

4 Simplify the radical

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

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

5 Simplify the radical

$$\sqrt{2^2 \cdot 2^2 \cdot 2 \cdot b^2 \cdot b^2 \cdot m^2 \cdot m^2 \cdot}$$

a		b	
$3bm^3$		$5bm^2\sqrt{3}$	
c	$5b^4m$	d	$4b^2m^2\sqrt{2}$
e	$b^3m^4\sqrt{2}$	f	$7bm$

6 Simplify the radical

$$\sqrt{3^2 \cdot 11 \cdot c^2 \cdot c^2 \cdot c \cdot y^2 \cdot y \cdot}$$

a		b	
$3c^2y\sqrt{11cy}$		$cy^2\sqrt{10cy}$	
c	$cy\sqrt{7cy}$	d	$c^2y^2\sqrt{10cy}$
e	$2c^2y\sqrt{12cy^2}$	f	$5cy\sqrt{13c^3y^2}$

7 Simplify the radical

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

a	b	c	d	e	f
$4d^2n\sqrt{5}$	$4d^2n$	$2dn^2\sqrt{3}$	dn^3	$2dn^3\sqrt{6}$	d^3n^4