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Math worksheet on *'Radicals - Adding and Subtracting - Simplification (Values and Variables) (Level 2)'*. Part of a broader unit on *'Radicals - Addition and Subtraction Intro'*

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1 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{45n^3} + \sqrt{5n^2}$$

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

2 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{3p} + \sqrt{75p^4}$$

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

3 Simplify the radical expressions to prepare for adding or subtracting $\sqrt{44x^3} + \sqrt{11x}$

a	$x^3\sqrt{11x} + \sqrt{11x}$	**b**	$2x\sqrt{11x} + 4\sqrt{14x}$
c	$2x\sqrt{11x} + \sqrt{11x}$	**d**	$x\sqrt{7x} + \sqrt{11x}$
e	$5x\sqrt{13x} + \sqrt{11x}$	**f**	$2x\sqrt{11x} + 2\sqrt{10x^3}$

4 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{3b^2} + \sqrt{75b^3}$$

a	$b + 5b\sqrt{3b}$	**b**	$b\sqrt{3} + 5b\sqrt{3b}$
c	$4b^3 + 8b\sqrt{4b}$	**d**	$b\sqrt{3} + 4b\sqrt{b^3}$
e	$2b\sqrt{3} + 5b\sqrt{3b}$	**f**	$2b\sqrt{3} + 3b\sqrt{b}$

5 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{63r^3} + \sqrt{7r}$$

a	$3r\sqrt{7r} + \sqrt{7r}$	**b**	$3r\sqrt{7r} + \sqrt{8r^2}$
c	$4r\sqrt{8r} + \sqrt{7r}$	**d**	$3r\sqrt{7r} + 4\sqrt{9r^3}$
e	$3r\sqrt{7r} + 2\sqrt{7r^3}$	**f**	$5r^3\sqrt{3r} + \sqrt{6r^3}$

6 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{32y^4} - \sqrt{2y}$$

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

7 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{80c^2} - \sqrt{5}$$

a	$4c\sqrt{5} - \sqrt{4}$	**b**	$4c\sqrt{5} - \sqrt{5}$
c	$4c\sqrt{5} - 1$	**d**	$c\sqrt{2} - \sqrt{5}$
e	$4c\sqrt{5} - \sqrt{3}$	**f**	$4c\sqrt{7} - 1$