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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

$$\sqrt{27d} - \sqrt{3d^3}$$

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

2 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{12y} - \sqrt{3y^4}$$

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

3 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{99z^3} + \sqrt{11z^4}$$

a	$3z\sqrt{11z} + z^4\sqrt{13}$	b	$3z\sqrt{11z} + 2z^3\sqrt{7}$
c	$3z\sqrt{11z} + z^2\sqrt{11}$	d	$2z^2\sqrt{13z} + z^2\sqrt{11}$
e	$z\sqrt{9z} + z\sqrt{8}$	f	$3z\sqrt{11z} + z\sqrt{12}$

4 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{18d^4} + \sqrt{2d^2}$$

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

5 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{11p} + \sqrt{176p}$$

a	$\sqrt{10p} + 4\sqrt{11p}$	b	$\sqrt{11p} + 6\sqrt{13p^2}$
c	$\sqrt{11p} + 4\sqrt{11p}$	d	$2\sqrt{7p} + \sqrt{7p^3}$
e	$\sqrt{11p} + \sqrt{9p}$	f	$\sqrt{13p^3} + 4\sqrt{11p}$

6 Simplify the radical expressions to prepare for adding or subtracting

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

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

7 Simplify the radical expressions to prepare for adding or subtracting

$$\sqrt{175d^3} - \sqrt{7}$$

a	$6d\sqrt{6d} - \sqrt{7}$	b	$5d\sqrt{7d} - 3\sqrt{5}$
c	$d^3\sqrt{5d^3} - \sqrt{10}$	d	$d^2\sqrt{6d} - \sqrt{7}$
e	$5d\sqrt{7d} - \sqrt{7}$	f	$5d^3\sqrt{7d} - \sqrt{7}$