



Math worksheet on 'Radicals - Adding and Subtracting (Values Only) (Level 5)'. Part of a broader unit on 'Radicals - Addition and Subtraction Intro'

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**1** Simplify, then add or subtract the radical expressions

$$\sqrt{176} - \sqrt{275} - \sqrt{44}$$

- |                                    |                                     |
|------------------------------------|-------------------------------------|
| <b>a</b> $3\sqrt{11} - 2\sqrt{11}$ | <b>b</b> $\sqrt{11} - 2\sqrt{11}$   |
| <b>c</b> $5\sqrt{11} - 2\sqrt{11}$ | <b>d</b> $2\sqrt{7} - 7\sqrt{10}$   |
| <b>e</b> $-1 - 2\sqrt{11}$         | <b>f</b> $-1\sqrt{11} - 2\sqrt{11}$ |

**2** Simplify, then add or subtract the radical expressions

$$\sqrt[3]{189} - \sqrt[3]{448} - \sqrt[3]{56}$$

- |   |  |
|---|--|
| <b>a</b> $-1\sqrt[3]{4} - 2\sqrt[3]{7}$ | <b>b</b> $\sqrt[3]{9} - 7\sqrt[3]{10} - \sqrt[3]{6}$ |
| <b>c</b> $-1\sqrt[3]{7} - 2\sqrt[3]{7}$ | <b>d</b> $\sqrt[3]{4} - 6\sqrt[3]{7} - 2\sqrt[3]{8}$ |
| <b>e</b> $2\sqrt[3]{8} - 4\sqrt[3]{6}$  | <b>f</b> $\sqrt[3]{7} - 2\sqrt[3]{7}$                |

**3** Simplify, then add or subtract the radical expressions

$$\sqrt{175} - \sqrt{63} - \sqrt{28}$$

- |                                  |                                  |
|----------------------------------|----------------------------------|
| <b>a</b> $4\sqrt{7} - 2\sqrt{7}$ | <b>b</b> $3\sqrt{3} - 6\sqrt{6}$ |
| <b>c</b> $\sqrt{7} - 2\sqrt{7}$  | <b>d</b> $2 - 2\sqrt{7}$         |
| <b>e</b> $2\sqrt{7} - 2\sqrt{7}$ | <b>f</b> $2\sqrt{4} - 2\sqrt{7}$ |

**4** Simplify, then add or subtract the radical expressions

$$\sqrt{27} - \sqrt{12} - \sqrt{27}$$

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| <b>a</b> $1 - 3\sqrt{3}$            | <b>b</b> $4\sqrt{4} - 1$            |
| <b>c</b> $5\sqrt{3} - 3\sqrt{3}$    | <b>d</b> $6 - \sqrt{4} - 3\sqrt{3}$ |
| <b>e</b> $2\sqrt{2} - \sqrt{4} - 3$ | <b>f</b> $\sqrt{3} - 3\sqrt{3}$     |

**5** Simplify, then add or subtract the radical expressions

$$\sqrt{275} + \sqrt{99} - \sqrt{176}$$

- |  |   |
|--|---|
| <b>a</b> $2\sqrt{11} + 6\sqrt{10} - 2\sqrt{9}$ | <b>b</b> $6\sqrt{9} + 2\sqrt{8} - 5\sqrt{12}$ |
| <b>c</b> $8 + 4\sqrt{11}$                      | <b>d</b> $8\sqrt{3} + 4\sqrt{11}$             |
| <b>e</b> $2\sqrt{11} + 4\sqrt{11}$             | <b>f</b> $8\sqrt{11} + 4\sqrt{11}$            |

**6** Simplify, then add or subtract the radical expressions

$$\sqrt{27} - \sqrt{27} + \sqrt{75}$$

- |  |                                  |
|--|----------------------------------|
| <b>a</b> $2\sqrt{6} - 2\sqrt{5} + 5\sqrt{4}$ | <b>b</b> $3\sqrt{4} + 7$         |
| <b>c</b> $5\sqrt{3}$                         | <b>d</b> $\sqrt{3} - 5\sqrt{3}$  |
| <b>e</b> $4\sqrt{3} - 5\sqrt{3}$             | <b>f</b> $2\sqrt{4} - 2\sqrt{6}$ |

**7** Simplify, then add or subtract the radical expressions

$$\sqrt[3]{88} - \sqrt[3]{88} - \sqrt[3]{704}$$

- |  |  |
|--|--|
| <b>a</b> $\sqrt[3]{7} - \sqrt[3]{12} - \sqrt[3]{14}$ | <b>b</b> $2\sqrt[3]{11} - 4\sqrt[3]{11}$ |
| <b>c</b> $\sqrt[3]{11} - 4\sqrt[3]{11}$              | <b>d</b> $3\sqrt[3]{11} - 4\sqrt[3]{11}$ |
| <b>e</b> $\sqrt[3]{9} - \sqrt[3]{8} - \sqrt[3]{10}$  | <b>f</b> $4\sqrt[3]{11}$                 |