



Math worksheet on 'Radicals - Multiplying Monomials with Binomials (Values Only) (Level 4)'. Part of a broader unit on 'Radicals - Multiplication Intro'

Learn online: app.mobius.academy/math/units/radicals_multiplication_intro/

1 Multiply the radical expressions and simplify the answer

$$3\sqrt{2} \cdot (\sqrt{11} + 2\sqrt{3})$$

- | | | | |
|----------|--------------------------|----------|--------------------------|
| a | $3\sqrt{22} + \sqrt{6}$ | b | $3\sqrt{22} + 6\sqrt{6}$ |
| c | $3\sqrt{22} + 6\sqrt{2}$ | d | $\sqrt{22} + 6\sqrt{6}$ |
| e | $3\sqrt{22} + 4\sqrt{6}$ | f | $3\sqrt{2} + 6\sqrt{6}$ |

2 Multiply the radical expressions and simplify the answer

$$(2\sqrt[3]{2} + \sqrt[3]{2}) \cdot 2\sqrt[3]{5}$$

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|----------|--------------------------------|----------|---------------------|
| a | $5\sqrt[3]{10}$ | b | $4 + 2\sqrt[3]{10}$ |
| c | $7\sqrt[3]{10}$ | d | $6\sqrt[3]{10}$ |
| e | $4\sqrt[3]{10} + 2\sqrt[3]{4}$ | f | $9\sqrt[3]{10}$ |

3 Multiply the radical expressions and simplify the answer

$$(3\sqrt{2} + \sqrt{5}) \cdot 4\sqrt{7}$$

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|----------|----------------------------|----------|----------------------------|
| a | $12\sqrt{14} + 3\sqrt{35}$ | b | $12\sqrt{14} + 4$ |
| c | $\sqrt{14} + 4\sqrt{35}$ | d | $12\sqrt{14} + 4\sqrt{35}$ |
| e | $4\sqrt{14} + 4\sqrt{35}$ | f | $12\sqrt{14} + \sqrt{35}$ |

4 Multiply the radical expressions and simplify the answer

$$2\sqrt{11} \cdot (\sqrt{5} + 3\sqrt{11})$$

- | | | | |
|----------|-------------------|----------|-------------------|
| a | $2\sqrt{55} + 44$ | b | $\sqrt{55} + 66$ |
| c | $3\sqrt{55} + 66$ | d | $2\sqrt{55} + 11$ |
| e | $2\sqrt{55} + 66$ | f | 68 |

5 Multiply the radical expressions and simplify the answer

$$2\sqrt{2} \cdot (\sqrt{5} + 3\sqrt{3})$$

- | | | | |
|----------|--------------------------|----------|--------------------------|
| a | $2\sqrt{10} + \sqrt{6}$ | b | $2\sqrt{10} + 4\sqrt{6}$ |
| c | $2\sqrt{10} + 6\sqrt{6}$ | d | $\sqrt{10} + 6\sqrt{6}$ |
| e | $2\sqrt{10} + 2\sqrt{6}$ | f | $2\sqrt{10} + 6$ |

6 Multiply the radical expressions and simplify the answer

$$2\sqrt[3]{11} \cdot (2\sqrt[3]{3} - \sqrt[3]{7})$$

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|----------|---------------------------------|----------|---------------------------------|
| a | $\sqrt[3]{33} - 2\sqrt[3]{77}$ | b | $4\sqrt[3]{33} - 2\sqrt[3]{77}$ |
| c | $3\sqrt[3]{33} - 2\sqrt[3]{77}$ | d | $4\sqrt[3]{33} - 2$ |
| e | $4\sqrt[3]{33} - \sqrt[3]{77}$ | f | $4\sqrt[3]{33} - 3\sqrt[3]{77}$ |

7 Multiply the radical expressions and simplify the answer

$$2\sqrt{3} \cdot (\sqrt{13} - 3\sqrt{11})$$

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|----------|--------------------------|----------|---------------------------|
| a | $2\sqrt{39} - \sqrt{33}$ | b | $2\sqrt{39} - 6\sqrt{33}$ |
| c | $2 - 6\sqrt{33}$ | d | $2\sqrt{39} - 2\sqrt{33}$ |
| e | $2\sqrt{39} - 6$ | f | $2\sqrt{39} - 3\sqrt{33}$ |