



Math worksheet on 'Radicals - Multiplying Monomials (Values and Variables) (Level 2)'. Part of a broader unit on 'Radicals - Multiplication Intro'

Learn online: [app.mobius.academy/math/units/radicals\\_multiplication\\_intro/](http://app.mobius.academy/math/units/radicals_multiplication_intro/)

1 Multiply the radical expressions and simplify the answer

$$\sqrt{75} \cdot \sqrt{12}$$

- |   |    |     |    |
|---|----|-----|----|
| a | b  | c   | d  |
| 1 | 90 | 150 | 30 |

2 Multiply the radical expressions and simplify the answer

$$\sqrt{27p} \cdot \sqrt{75p}$$

- |              |       |         |    |     |               |
|--------------|-------|---------|----|-----|---------------|
| a            | b     | c       | d  | e   | f             |
| $45\sqrt{p}$ | $45p$ | $45p^2$ | 45 | $p$ | $45p\sqrt{p}$ |

3 Multiply the radical expressions and simplify the answer

$$\sqrt{20m^2} \cdot \sqrt{125m^4}$$

- |   |                 |   |                 |
|---|-----------------|---|-----------------|
| a | $50m^2\sqrt{m}$ | b | $50m^3\sqrt{m}$ |
| c | $50m^3$         | d | $50m^4$         |
| e | $250m^3$        | f | $50m^2$         |

4 Multiply the radical expressions and simplify the answer

$$\sqrt{20b^4} \cdot \sqrt{125b^2}$$

- |         |                 |          |                 |       |         |
|---------|-----------------|----------|-----------------|-------|---------|
| a       | b               | c        | d               | e     | f       |
| $50b^3$ | $50b^3\sqrt{b}$ | $200b^3$ | $50b^2\sqrt{b}$ | $b^3$ | $50b^4$ |

5 Multiply the radical expressions and simplify the answer

$$\sqrt{27} \cdot \sqrt{75z}$$

- |               |            |               |       |    |              |
|---------------|------------|---------------|-------|----|--------------|
| a             | b          | c             | d     | e  | f            |
| $225\sqrt{z}$ | $\sqrt{z}$ | $45z\sqrt{z}$ | $45z$ | 45 | $45\sqrt{z}$ |

6 Multiply the radical expressions and simplify the answer

$$\sqrt{44p^4} \cdot \sqrt{99p^2}$$

- |         |         |          |         |                 |       |
|---------|---------|----------|---------|-----------------|-------|
| a       | b       | c        | d       | e               | f     |
| $66p^4$ | $66p^3$ | $132p^3$ | $66p^2$ | $66p^3\sqrt{p}$ | $p^3$ |

7 Multiply the radical expressions and simplify the answer

$$\sqrt{32y^2} \cdot \sqrt{8y^4}$$

- |       |                 |         |                 |         |         |
|-------|-----------------|---------|-----------------|---------|---------|
| a     | b               | c       | d               | e       | f       |
| $y^3$ | $16y^2\sqrt{y}$ | $16y^3$ | $16y^3\sqrt{y}$ | $32y^3$ | $16y^2$ |