



## Radicals - Multiplying Monomials (Values and Variables)

**1** Multiply the radical expressions and simplify the answer

$$\sqrt{8m^3r^3} \cdot \sqrt{27m^2r^2}$$

A  $6m^2r^2\sqrt{6r}$

B  $6m^2r^2\sqrt{6mr}$

C  $6m^2r\sqrt{6mr}$

D  $6m^2r^2\sqrt{mr}$

E  $6m^2r^3\sqrt{6m}$

**2** Multiply the radical expressions and simplify the answer

$$\sqrt{52z^4x^3} \cdot \sqrt{32z^2x^4}$$

A  $8z^3x^4\sqrt{26}$

B  $8z^2x^3\sqrt{26x}$

C  $8z^3x^3\sqrt{x}$

D  $8z^3x^3\sqrt{26x}$

E  $8z^3x^2\sqrt{26x}$

**3** Multiply the radical expressions and simplify the answer

$$\sqrt{8pt^4} \cdot \sqrt{176p^3}$$

A  $p^2t^2$

B  $8p^2t^2\sqrt{22}$

C  $8p^2t\sqrt{22t}$

D  $8p^2t^2\sqrt{22t}$

**4** Multiply the radical expressions and simplify the answer

$$\sqrt{117r^3p^3} \cdot \sqrt{27r^3p^2}$$

A  $9r^2p^2\sqrt{39rp}$

B  $9r^3p^3\sqrt{39}$

C  $9r^3p\sqrt{39p}$

D  $9r^3p^3\sqrt{39p}$

E  $9r^3p^2\sqrt{39p}$

**5** Multiply the radical expressions and simplify the answer

$$\sqrt{52q^2} \cdot \sqrt{48q}$$

A  $8q^2\sqrt{39}$

B  $24q\sqrt{39q}$

C  $8q^2\sqrt{39q}$

D  $8q\sqrt{39}$

E  $8q\sqrt{39q}$

**6** Multiply the radical expressions and simplify the answer

$$\sqrt{28z^2p^4} \cdot \sqrt{75p}$$

A  $10zp^2\sqrt{p}$

B  $50zp^2\sqrt{21p}$

C  $10p^2\sqrt{21p}$

D  $zp^2\sqrt{p}$

E  $10zp^2\sqrt{21p}$

**7** Multiply the radical expressions and simplify the answer

$$\sqrt{27m^4} \cdot \sqrt{12m^4y^4}$$

A  $18m^4y^2$

B  $18m^3y^2$

C  $18m^4y^3$

D  $18m^5y^2$

**8** Multiply the radical expressions and simplify the answer

$$\sqrt{99q^3y} \cdot \sqrt{8q^4y}$$

A  $6q^3y^2\sqrt{22q}$

B  $6q^3y\sqrt{22q}$

C  $6q^3y\sqrt{22qy}$

D  $6q^4y\sqrt{22q}$

E  $6q^2y\sqrt{22q}$