

Simplify each of the following expressions. The answer bank is provided for you at the bottom of the page.

1) $\sqrt{15} \cdot \sqrt{12}$	2) $3\sqrt{2} \cdot \sqrt{6}$
3) $\frac{\sqrt{3}}{5\sqrt{6}}$	4) $-\sqrt{20} \cdot -4\sqrt{10}$
5) $\frac{\sqrt{20}}{\sqrt{36}}$	6) $2\sqrt{3x^2} \cdot 5\sqrt{12x}$

Answer Bank:

$\frac{\sqrt{5}}{3}$	$6\sqrt{5}$	$10x^2\sqrt{x}$	$\sqrt{2}$	$\frac{\sqrt{10x}}{2}$	$\frac{8\sqrt{3x}}{3x}$
$2\sqrt{5} + 5$	$6\sqrt{3}$	$60x\sqrt{x}$	$40\sqrt{2}$	$\frac{\sqrt{2}}{10}$	$5x^2\sqrt{x}$

$$7) \frac{4\sqrt{4x^2}}{\sqrt{3x^3}}$$

$$8) \sqrt{10x^2} \cdot \sqrt{10x^3}$$

$$9) \sqrt{5}(2 + \sqrt{5})$$

$$10) \frac{5\sqrt{8}}{5\sqrt{4}}$$

$$11) \frac{5\sqrt{2x^4}}{2\sqrt{5x^3}}$$

$$12) \sqrt{5x^3} \cdot \sqrt{5x^2}$$

CHALLENGE: if you were in the 'ready' groups in class you must complete these problems*

$$5) 4\sqrt{6r}(3\sqrt{3r^3} + 4r)$$

$$6) \frac{3\sqrt{6x^4y^3} \cdot 2\sqrt{3x^2y^2}}{9\sqrt{5x^2y^2}}$$

