

# Calculs de radicaux

Simplifier **sans calculatrice** les expressions suivantes :

$$3\sqrt{8} + \sqrt{32} - \sqrt{72} - 2\sqrt{128}$$

$$(\sqrt{5} + 6\sqrt{2})^2$$

$$(3 - \sqrt{2})^2$$

$$4\sqrt{27} + 2\sqrt{48} - \sqrt{75}$$

$$(\sqrt{2} - 1)^2$$

$$(2\sqrt{5} - 3)^2$$

$$2\sqrt{12} + 3\sqrt{27} - 2\sqrt{48}$$

$$(\sqrt{3} - 1)^2$$

$$(3\sqrt{7} - 2\sqrt{5})^2$$

$$3\sqrt{80} - 2\sqrt{45} + \sqrt{20}$$

$$(\sqrt{3} - 2)^2$$

$$(7\sqrt{3} - 4\sqrt{2})^2$$

$$5\sqrt{54} - 3\sqrt{24} + 2\sqrt{6}$$

$$3\sqrt{125} - 2\sqrt{45} + \sqrt{20} - 2\sqrt{80}$$

$$(5 - \sqrt{3})^2$$

$$(3 - \sqrt{2})(3 + \sqrt{2})$$

$$2\sqrt{45} + \sqrt{245} - \sqrt{20} + \sqrt{125}$$

$$(5 - \sqrt{7})^2$$

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

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

$$(4 - \sqrt{2})^2$$

$$(\sqrt{5} - \sqrt{3})(\sqrt{5} + \sqrt{3})$$

$$(2\sqrt{7} + 3\sqrt{2})^2$$

$$(\sqrt{5} - \sqrt{3})^2$$

$$(1 + \sqrt{3})(\sqrt{3} - 1)$$

**Réponses en vrac :**

$$38 - 12\sqrt{10}$$

$$7 + 2\sqrt{10}$$

$$7 - 4\sqrt{3}$$

$$16\sqrt{3}$$

$$29 - 12\sqrt{5}$$

$$16\sqrt{5}$$

$$2$$

$$5\sqrt{3}$$

$$83 - 12\sqrt{35}$$

$$11 - 6\sqrt{2}$$

$$4 - 2\sqrt{3}$$

$$3 - 2\sqrt{2}$$

$$15\sqrt{3}$$

$$11\sqrt{6}$$

$$8\sqrt{5}$$

$$2$$

$$46 + 12\sqrt{14}$$

$$28 - 10\sqrt{3}$$

$$8 - 2\sqrt{15}$$

$$-12\sqrt{2}$$

$$179 - 56\sqrt{6}$$

$$3\sqrt{5}$$

$$1$$

$$32 - 10\sqrt{7}$$

$$7$$

$$77 + 12\sqrt{10}$$

$$18 - 8\sqrt{2}$$