

1. Multiply:

a) $\sqrt{6}(4\sqrt{6} - 3\sqrt{2}) =$

b) $\sqrt[3]{x}(\sqrt[3]{24x^2} - \sqrt[3]{x}) =$

c) $(3\sqrt{5} - 2\sqrt{3})(4\sqrt{5} + 5\sqrt{3}) =$

d) $(\sqrt{2} + \sqrt{7})^2 =$

e) $(\sqrt[3]{x} - 3)(\sqrt[3]{x} + 7) =$

2. Rationalize the denominator:

a) $\frac{\sqrt{7}}{\sqrt{3}} =$

b) $\sqrt[3]{\frac{3}{4}} =$

c) $\frac{10}{\sqrt[3]{4x^2}} =$

$$d) \sqrt[3]{\frac{3}{xy^2}} =$$

$$e) \frac{3xy^2}{\sqrt[5]{8xy^3}} =$$

(For this next one, simplify first, then rationalize)

$$f) -\sqrt{\frac{150a^3}{b^5}} =$$

$$g) \frac{15}{\sqrt{6}+1} =$$

$$h) \frac{\sqrt{11}-\sqrt{5}}{\sqrt{11}+\sqrt{5}} =$$

$$i) \frac{\sqrt{x}-2}{\sqrt{x}-5} =$$

Q: What runs but never walks, has a mouth but never talks?