

# Eggs in a Basket

Practice review

Simplify

$$\left(\frac{2^1}{2^1}\right)$$
$$2^{1-1} = 2^0$$

$$\left(\frac{2m^{-4}n^2}{2n^4 \cdot m^3}\right)^2$$

$$\left(\frac{1m^{-4-3}n^{2-4}}{m^{-7}n^{-2}}\right)^2$$
$$\frac{m^{-14}n^{-4}}{m^{-7}n^{-2}}$$
$$\frac{1}{m^4n^4}$$

Simplify

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

Simplify

$$\left(r^4\right)^{\frac{1}{2}}$$

Simplify

$$\left(x^{\frac{3}{2}}\right)^{\frac{1}{2}} \cdot \left(x^{\frac{7}{4}}\right)^{\frac{1}{2}}$$

$$\begin{aligned} & x^{\frac{3}{2} \cdot \frac{1}{2}} \cdot x^{\frac{7}{4} \cdot \frac{1}{2}} \\ & x^{\frac{3}{4}} \cdot x^{\frac{7}{8}} \\ & x^{\frac{3}{4} + \frac{7}{8}} \\ & x^{\frac{6}{8} + \frac{7}{8}} \\ & = x^{\frac{13}{8}} \end{aligned}$$

Simplify

$$-1\sqrt[3]{6} - 2\sqrt[3]{2}$$

$$-3\sqrt[3]{6} + 2\sqrt[3]{6} - \sqrt[3]{16}$$

$$-3+2$$
$$-1\sqrt[3]{6} - \sqrt[3]{16}$$

2 2 2 2 2

Simplify

$$\frac{x^1 y^{-4} \cdot y^1 x^{-2}}{(2^1 y^1 x^3)^4}$$

$$\begin{aligned} & \frac{x^{1+(-2)} y^{-4+1}}{2^4 y^4 x^{12}} \\ & \frac{x^{-1} y^{-3}}{16 y^4 x^{12}} = \frac{x^{-1-12} y^{-3-4}}{16} \\ & = \frac{1}{16 x^{13} y^7} \end{aligned}$$

Simplify

$$+ \frac{-5}{4 + \sqrt{3}} \cdot \frac{4 - \sqrt{3}}{4 - \sqrt{3}} = \frac{-20 + 5\sqrt{3}}{13}$$

$$\frac{16 - \cancel{4\sqrt{3}} + \cancel{4\sqrt{3}} - \sqrt{9}}{16 - 3}$$



Simplify

$$(216x^9)^{\frac{2}{3}}$$

$$\begin{aligned} & (6^3 x^9)^{\frac{2}{3}} \\ & 6^{3 \cdot \frac{2}{3}} x^{9 \cdot \frac{2}{3}} \\ & 6^2 x^6 \\ & 36x^6 \end{aligned}$$

Simplify

$$\left(x^2 y^{-\frac{2}{3}} \cdot (xy)^{\frac{3}{2}}\right)^0$$

Simplify

$$-3\sqrt[3]{-6} + 2\sqrt[3]{135} + 3\sqrt[3]{162}$$

Simplify

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

Simplify

$$(64b^3)^{\frac{2}{3}}$$

Simplify

$$\frac{\sqrt{15}}{4\sqrt{48}}$$

Simplify

$$\left(x^{-2}y^{-\frac{1}{4}}\right)^{\frac{1}{2}} \cdot x^{-\frac{3}{2}}y^0$$

Simplify

$$\frac{2yx^{-3}}{2y \cdot (x^{-4}y^3)^{-1}}$$



Simplify

$$-2\sqrt[3]{24} - 2\sqrt[3]{135} + 3\sqrt[3]{24}$$

Simplify

$$yx^{-1} \cdot \left(x^4 y^{\frac{5}{3}}\right)^{-\frac{5}{4}}$$

Simplify

$$\frac{(xy)^{-4} \cdot 2x^3}{x^3 y^{-1}}$$