

1. Simplify each expression.

a. $\sqrt{\frac{15x^3}{2}} \cdot \sqrt{\frac{8}{3}}$

b. $\frac{52x^{16}y^5}{2y^7x^{10}}$

2. Use the *point-slope* equation of a line to determine the *slope – intercept* form of the line which has a slope of $\frac{2}{3}$ and passes through $(3, -1)$.

3. Completely factor the following trinomials.

a. $3x^2 + 30x + 72$

b. $81x^2 - 126xy + 49y^2$

4. A rectangular lot is being fenced on three sides. The fencing along the lot's length costs \$8 per foot while the fencing along the two side widths costs \$6 per foot. The total fencing comes out to 222ft while the cost of the fencing along the three sides comes to \$1556. What are the lot's dimensions?

SOLUTIONS:

1a) $2x\sqrt{5x}$

1b) $\frac{26x^6}{y^2}$

2) $y = \frac{2}{3}x - 3$

3a) $3(x + 6)(x + 4)$ or $3(x + 4)(x + 6)$

3b) $(9x - 7y)^2$

4) The side widths are 55ft and the length is 112ft.