

$$1. \frac{3xy}{2x} = \frac{3y}{2} \cdot \frac{x}{x} = \frac{3y}{2}$$

$$2. \frac{8x}{4} = \frac{2x}{1} \cdot \frac{4}{4} = 2x$$

$$3. \frac{30xy}{16y} = \frac{15x}{8} \cdot \frac{2y}{2y} = \frac{15x}{8}$$

$$4. \frac{72x}{18xy} = \frac{4}{y} \cdot \frac{18x}{18x} = \frac{4}{y}$$

$$5. \frac{x(x-6)}{2x} = \frac{x-6}{2} \cdot \frac{x}{x} = \frac{x-6}{2}$$

$$6. \frac{6xy(2x-1)}{3x} = \frac{2y(2x-1)}{1} \cdot \frac{3x}{3x} = 2y(2x-1)$$

$$7. \frac{(5x+16)(2x+7)}{6(2x+7)} = \frac{5x+16}{6} \cdot \frac{2x+7}{2x+7} = \frac{5x+16}{6}$$

$$8. \frac{24x(y+8)(x+1)}{15x(y+8)} = \frac{8(x+1)}{5} \cdot \frac{3x(y+8)}{3x(y+8)} = \frac{8(x+1)}{5}$$

$$9. \frac{150xy(2x+17)(8x-3)}{48y} = \frac{25x(2x+17)(8x-3)}{8} \cdot \frac{6y}{6y}$$
$$= \frac{25x(2x+17)(8x-3)}{8}$$