

$$1. \frac{2y-14}{y^2-2y-35} \div \frac{6y-30}{y^2-25}$$

$$\frac{2(y-7)}{y^2+5y-7y-35} \times \frac{1}{y^2-25} = 25$$

$$\frac{2(y-7)}{y(y+5)-7(y+5)} \times \frac{1}{y^2} = 25$$

$$\frac{2-25y^3-125y^2}{y^3+5y^2}$$

$$= \frac{-25y^3-125y^2+2}{y^3+5y^2}$$

$$2. \frac{9x-27}{15x+30} \div \frac{14-7x}{6x^2-18}$$

$$\frac{9x-27}{3(5x+10)} \times \frac{1}{14} = \frac{423}{126x}$$

$$\frac{3 \times 27}{5 \times 10} \times \frac{1}{14} - 42 \times 3 \times 26 \times$$

$$\frac{81}{5 \times 10} \times \frac{1}{14} - 42 \times 3 \times 26 \times$$

$$\frac{81 - 2940x^4 - 5880^3 \times 8820x^2 + 17640}{70x + 140}$$

$$3. \frac{25x^3y^4}{36m^4n} \div \frac{10x^2y^3}{18m^2n}$$

$$\frac{25x^3y^4}{18m^2n} \times \frac{1}{18} \times \frac{5x^2y^3}{3} =$$

$$\frac{175x^5y^7}{972m^2n}$$

$$4. \frac{6xy}{5y^2} \div \frac{10y}{3x}$$

$$\frac{6x}{5y} \times \frac{1}{10y}$$

$$\frac{3x}{5} \times \frac{1}{5} = \frac{3x}{25}$$

5. $\frac{3m}{8n^2} \div 16n^2$ 9m

$$\frac{3m}{8} \times \frac{1}{16} = \frac{3m}{128}$$