

Chapter 7 Review

Factor completely

1a.  $121x^2 - 81y^2$

1b.  $7x^2 - 25x - 12$

2. Solve by factoring  $6x^2 + x - 12 = 0$

Find the value for which the expression is undefined

3.  $\frac{8x}{3x-10}$

$$\frac{x^2+7x+6}{x^2+7x+12}$$

Simplify

4.  $\frac{x^2+2x-3}{x^2-3x-18}$

$$\frac{x^2+4x}{5x^2+25x+20}$$

$$5. \frac{x+7}{6x+3} \cdot \frac{9}{x^2-49}$$

$$6. \frac{x^2+6x}{x^2-36} \div \frac{x-6}{x^2-9x+18}$$

$$7. \frac{3x}{x+7} + \frac{21}{x+7}$$

$$8. \frac{9}{x+1} - \frac{-5}{x+1}$$

$$9. \frac{5}{x+3} + \frac{6}{x}$$

$$10. \frac{\frac{1}{36} - \frac{1}{x^2}}{\frac{1}{6} + \frac{1}{x}}$$

$$11. \frac{3}{x-9} + \frac{4}{x+9} = \frac{-72}{x^2-81}$$

$$12. \frac{2}{x+2} = \frac{3}{2x+5}$$

13. A six foot tall man casts a shadow that is 3.5 feet long. If the shadow of a flag pole is 8 feet long, how tall is the flag pole?