

KEY

Chapter 11 Review #1

Let's practice what we've learned about working with rational expressions.

Complete each problem as indicated. Express answers in simplest form.

1. $\frac{3x^2y}{12xy^3z} =$

$$\frac{x}{4y^2z}$$

2. $\frac{a^2-25}{a^2+3a-10} =$

$$\frac{a-5}{a-2}$$

3. $\frac{x^2+10x+21}{x^3+x^2-42x} =$

$$\frac{x+3}{x(x-6)}$$

4. $\frac{7b^2}{3b} \cdot \frac{6a^2}{b} =$

$$\frac{14a^2b}{3}$$

5. $(3x+30) \cdot \frac{10}{x^2-100} =$

$$\frac{30}{x-10}$$

6. $\frac{x^2+x-12}{x+2} \cdot \frac{x+4}{x^2-x-6} = \frac{(x+4)^2}{(x-2)^2}$

$$7. \quad \frac{p^3}{2q} \div \frac{p^2}{4q} =$$

$$\boxed{2p}$$

$$8. \quad \frac{3y-12}{y+4} \div (y^2-6y+8) =$$

$$\boxed{\frac{3}{(y+4)(y-2)}}$$

$$9. \quad \frac{2x}{x-3} - \frac{6}{x-3} =$$

$$\boxed{2}$$

$$10. \quad \frac{-5}{2n-5} + \frac{2n}{2n-5} =$$

$$\boxed{1}$$

$$11. \quad \frac{m^2}{m-n} - \frac{2mn-n^2}{m-n} =$$

$$\boxed{m-n}$$

$$12. \quad \frac{7}{3a} - \frac{3}{6a^2} =$$

$$\boxed{\frac{14a-3}{6a^2}}$$

$$13. \quad \frac{2a}{2a+8} - \frac{4}{5a+20} =$$

$$\frac{10a-8}{10(a+4)}$$

$$\boxed{\frac{5a-4}{5(a+4)}}$$

$$14. \quad \frac{3a}{a-2} + \frac{5a}{a+1} =$$

$$\boxed{\frac{a(8a-7)}{(a-2)(a+1)}}$$