

## Chapter 12 Practice Test

Find the excluded values, if any, of the expression.

1.  $-\frac{4}{b+6}$

2.  $\frac{x-1}{(x-3)(x+4)}$

Simplify:

3.  $\frac{-2x}{x-x^2}$

4.  $\frac{3u+uv}{4u}$

5.  $\frac{-2x+2x^2}{-6x+6}$

a.  $\frac{1-x}{6}$

b.  $\frac{x-x^2}{3x-3}$

c.  $\frac{x^2}{6}$

d.  $-\frac{x}{3}$

6. Simplify the expression  $\frac{x^2-9}{x^2+3x}$ .

7. Simplify the expression  $\frac{x^2+4x}{x^2-16}$ .

8. Simplify the expression  $\frac{x^2 - 4}{x^2 - 4}$ .

9. Simplify  $\frac{x^2 + 4x - 21}{3 + 5x - 2x^2}$ . State the excluded values.

Find the product.

10.  $\frac{5y^2}{3} \cdot \frac{12}{20y}$

\_\_\_\_\_ 11.  $\frac{5y^2}{9} \cdot \frac{18}{6y}$

a.  $\frac{2}{3}$

b.  $\frac{2y^2}{15}$

c.  $6y$

d.  $\frac{5y}{3}$

12.  $\frac{13x^5}{12x^3} \cdot \frac{6x^2}{4x^6}$

13.  $\frac{16x^6}{9x^4} \cdot \frac{15x}{8x^2}$

14.  $(x - 4) \cdot \frac{x + 3}{x^2 - 16}$

15.  $(x-4) \cdot \frac{x^2-16}{x+5}$

a.  $\frac{x+5}{(x-4)(x^2-16)}$

b.  $\frac{x+5}{x+4}$

c.  $\frac{x+5}{x-4}$

d.  $\frac{5}{4}$

16.  $\frac{2(A-4)}{3} \cdot \frac{3}{8A-32}$

17.  $\frac{2}{x-3} \cdot \frac{2x-6}{8(x+4)}$

Find the quotient.

18.  $\frac{15x^3}{8x^5} \div \frac{10x^4}{4x}$

19.  $\frac{x+4}{x-4} \div \frac{x^2-16}{4-x}$

a.  $\frac{x+4}{x-4}$

b.  $\frac{1}{4-x}$

c.  $\frac{1}{x-4}$

d.  $\frac{1}{2-x}$

20.  $\frac{x^2-4}{x+5} \div (x-2)$

21.  $\frac{x^2+2x+1}{x^2-1} \div \frac{x^2-1}{x^2-1}$

## Answer Section

1.  $b \neq -6$
2.  $x \neq -4, x \neq 3$
3.  $\frac{2}{x-1}$
4.  $\frac{3+v}{4}$
5. D
6.  $\frac{x-3}{x}$
7.  $\frac{x}{x-4}$
8.  $\frac{x+2}{x-2}$
9.  $-\frac{x+7}{2x+1}$ . The excluded values are 3 and  $-\frac{1}{2}$ .
10.  $y$
11. D
12.  $\frac{13}{8x^2}$
13.  $\frac{10}{3}x$
14.  $\frac{x+3}{x+4}$
15. B
16.  $\frac{1}{4}$
17.  $\frac{1}{2(x+4)}$
18.  $\frac{3}{4x^5}$
19. B
20.  $\frac{x+2}{x+5}$
21.  $\frac{2}{x-1}$