

## Unit 4A Test Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Simplify each expression.**

1)  $\frac{8x^3}{16x^2}$

$\frac{x}{2}$

2)  $\frac{10a+8}{8}$

$\frac{5a+4}{4}$

3)  $\frac{5x^2+7x-6}{3x^2+8x+4}$

$\frac{5x-3}{3x+2}$

4)  $\frac{1}{7r+7} \div \frac{r-3}{28r^3+28r^2}$

$\frac{4r^2}{r-3}$

5)  $\frac{1}{7a+8} \cdot \frac{21a^3+24a^2}{8a+8}$

$\frac{3a^2}{8(a+1)}$

6)  $\frac{3n-6}{3n^2+13n-10} \cdot \frac{9n^2-15n+6}{3n-3}$

$\frac{3(n-2)}{n+5}$

7)  $\frac{6n+2}{15n^2+14n+3} \div \frac{n+2}{15n+9}$

$\frac{6}{n+2}$

8)  $\frac{a+2}{5a^2-12a-9} - \frac{a-1}{5a^2-12a-9}$

$\frac{3}{5a^2-12a-9}$

$$9) \frac{4n+6}{6n-12} - \frac{n+3}{6n-12}$$

$$\frac{n+1}{2n-4}$$

$$10) \frac{3}{v-3} + \frac{5v}{v-1}$$

$$\frac{-12v-3+5v^2}{(v-3)(v-1)}$$

$$11) \frac{4}{5a-1} - \frac{4a}{a-4}$$

$$\frac{8a-16-20a^2}{(a-4)(5a-1)}$$

$$12) \frac{3p}{5p-4} - \frac{2p}{p-3}$$

$$\frac{-7p^2-p}{(p-3)(5p-4)}$$

Solve each equation. Remember to check for extraneous solutions.

$$13) \frac{6}{x} = 1 - \frac{1}{x}$$

$$\{7\}$$

$$14) \frac{2b}{5} = \frac{b^2-5b}{5b}$$

$$\{-5\}$$

$$15) \frac{x-5}{x^2+3x} = \frac{1}{x} - \frac{2}{x+3}$$

$$\{4\}$$

$$16) \frac{n-5}{n} = \frac{1}{n^2-2n} + \frac{n^2-4n-5}{n^2-2n}$$

$$\left\{ \frac{14}{3} \right\}$$

$$17) \frac{6}{9} = \frac{v-5}{6}$$

$$\{9\}$$