

Practice 14.1, 14.2

Name _____

(14.1) If possible, evaluate the expression at the given value of the variable.

1) $\frac{x}{x+6}$, $x = -6$

2) $\frac{5x^2 + 8x}{3x}$, $x = -3$

Find any values of the variable that make the expression undefined.

3) $\frac{4y - 5}{y^2 - 36}$

4) $\frac{x^2 - 16}{x^2 + 17x + 72}$

Write the expression in lowest terms.

5) $\frac{(y+2)(y-3)}{(y-3)(y+9)}$

6) $\frac{4x+2}{20x^2+18x+4}$

7) $\frac{6x+18}{8x+24}$

8) $\frac{m^2 - 9m}{9 - m}$

9) $\frac{s^2 + d^2}{s - d}$

(14.2) Multiply and reduce to lowest terms.

$$10) \frac{7x^2}{3} \cdot \frac{18}{x^3}$$

$$11) \frac{4p - 4}{p} \cdot \frac{7p^2}{9p - 9}$$

$$12) \frac{k^2 + 8k + 15}{k^2 + 9k + 18} \cdot \frac{k^2 + 6k}{k^2 - 2k - 35}$$

Divide and reduce to lowest terms.

$$13) \frac{4x^2}{5} \div \frac{x^3}{25}$$

$$14) \frac{z^2 - 9}{z} \div \frac{z + 3}{z - 8}$$

$$15) \frac{y^3 - 3y}{y^2 - 9} \div \frac{y^2 + 4y + 4}{y^2 + 5y + 6}$$

Answer Key

Testname: WKS_14.1_14.2

1) Undefined

2) $-\frac{7}{3}$

3) 6, -6

4) -8, -9

5) $\frac{y+2}{y+9}$

6) $\frac{1}{5x+2}$

7) $\frac{3}{4}$

8) -m

9) Cannot reduce

10) $\frac{42}{x}$

11) $\frac{28p}{9}$

12) $\frac{k}{k-7}$

13) $\frac{20}{x}$

14) $\frac{(z-3)(z-8)}{z}$

15) $\frac{y(y^2-3)}{(y-3)(y+2)}$