

## Dividing Rational Expressions

**Divide.**

1) 
$$\frac{8 + 2a - a^2}{a^2 - 2a - 8} \div \frac{4a}{a + 6}$$

2) 
$$\frac{x + 10}{x + 7} \div \frac{x + 10}{5x^2 + 5x}$$

3) 
$$\frac{1}{2x + 9} \div \frac{8x}{16x + 72}$$

4) 
$$\frac{m + 10}{9m^2 - 90m} \div \frac{1}{9m}$$

5) 
$$\frac{2p - 6}{-p^2 + 9p - 18} \div \frac{6p^2 - 54p}{6p^2 - 36p}$$

6) 
$$\frac{3a - 12}{a^2 - a - 12} \div \frac{a + 5}{4a^2 + 12a}$$

7) 
$$\frac{42n - 54}{30 - 6n} \div \frac{18 - 14n}{n^2 - 10n + 25}$$

8) 
$$\frac{7p^3 + 49p^2}{p^2 + 12p + 35} \div \frac{p - 6}{2p^3 - 12p^2}$$

9) 
$$\frac{10m^2 - 27m + 5}{4m^3 - 10m^2} \div \frac{10m^2 - 42m + 8}{18m - 72}$$

10) 
$$\frac{35x^2 + 28x}{5x^2 - 3x - 2} \div \frac{5x + 4}{5x^2 + 37x + 14}$$

## Answers to Dividing Rational Expressions

$$1) -\frac{(a+6)}{4a}$$

$$2) \frac{5x(x+1)}{x+7}$$

$$3) \frac{1}{x}$$

$$4) \frac{m+10}{m-10}$$

$$5) -\frac{2}{p-9}$$

$$6) \frac{12a}{a+5}$$

$$7) \frac{n-5}{2}$$

$$8) \frac{14p^4}{p+5}$$

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

$$10) \frac{7x(x+7)}{x-1}$$