

Dividing Rational Expressions

Name _____

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Date _____

Simplify each expression.

$$1) \frac{n-9}{n^2-7n-30} \div \frac{1}{n-10}$$

$$2) \frac{5p^2+30p}{p+6} \div \frac{5p}{p+1}$$

$$3) \frac{b-6}{b-2} \div \frac{b-8}{b^2-10b+16}$$

$$4) \frac{10k}{10k^2-80k} \div \frac{1}{k-5}$$

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

$$6) \frac{1}{7x} \div \frac{x+8}{x^2+18x+80}$$

$$7) \frac{n^2+8n+7}{n^2+n-42} \div \frac{1}{n-6}$$

$$8) \frac{18n^2-27n}{n-3} \div \frac{18n^2-27n}{8}$$

$$9) \frac{3}{n^2-13n+40} \div \frac{1}{n-5}$$

$$10) \frac{1}{x-9} \div \frac{x-7}{5x^2-45x}$$

$$11) \frac{1}{k+9} \div \frac{k+5}{3k+15}$$

$$12) \frac{7}{p^2+2p-48} \div \frac{1}{6-p}$$

$$13) \frac{1}{n-4} \div \frac{8n^2}{n^2+n-20}$$

$$14) \frac{3}{9a} \div \frac{a+3}{2a^3+6a^2}$$

$$15) \frac{2}{p-3} \div \frac{2}{5p-15}$$

$$16) \frac{4-a}{a^2+6a-40} \div \frac{1}{5a^2+50a}$$

$$17) \frac{1}{2m} \div \frac{m+10}{2m^2-16m}$$

$$18) \frac{1}{v-1} \div \frac{4}{4v-24}$$

$$19) \frac{20b-36}{50b^3-90b^2} \div \frac{1}{10b^2}$$

$$20) \frac{x^2-11x+24}{x-8} \div \frac{x^2-6x+9}{x-8}$$

Answers to Dividing Rational Expressions

1) $\frac{n-9}{n+3}$

5) $\frac{5}{2}$

9) $\frac{3}{n-8}$

13) $\frac{n+5}{8n^2}$

17) $\frac{m-8}{m+10}$

2) $p+1$

6) $\frac{x+10}{7x}$

10) $\frac{5x}{x-7}$

14) $\frac{2a}{3}$

18) $\frac{v-6}{v-1}$

3) $b-6$

7) $n+1$

11) $\frac{3}{k+9}$

15) 5

19) 4

4) $\frac{k-5}{k-8}$

8) $\frac{8}{n-3}$

12) $-\frac{7}{p+8}$

16) $-5a$

20) $\frac{x-8}{x-3}$

