

Simplifying Rational Expressions

Date _____ Period _____

Simplify each expression.

1) $\frac{x - 8}{x^2 - 6x - 16}$

2) $\frac{8m - 48}{m - 6}$

3) $\frac{10p - 50}{5 - p}$

4) $\frac{24v}{30v - 36}$

5) $\frac{50}{35x - 25}$

6) $\frac{56p^2 + 8p}{16p^2}$

7) $\frac{x^2 + x - 20}{4x^2 + 20x}$

8) $\frac{n^2 + 12n + 32}{n^2 + 6n - 16}$

9) $\frac{x^2 + 11x + 24}{x^2 + 9x + 18}$

10) $\frac{a^2 - 19a + 90}{5a^2 - 50a}$

11) $\frac{10x^2 + 25x}{25x^2 - 45x}$

12) $\frac{n^2 - 3n - 40}{8n^2 - 64n}$

13) $\frac{10x - 6}{14x + 20}$

14) $\frac{2r + 4}{r^2 - 4r - 12}$

15) $\frac{v^2 - 8v + 12}{v^2 + 4v - 12}$

16) $\frac{p^2 - 12p + 36}{p^2 - 10p + 24}$

17) $\frac{a - 3}{8a - 24}$

18) $\frac{x - 1}{3x^2 - 3x}$

19) $\frac{72x}{40x^2 - 24x}$

20) $\frac{3x^2 + 23x - 70}{x + 10}$

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Date _____ Period _____

Simplify each expression.

1) $\frac{x-8}{x^2-6x-16}$

$$\frac{1}{x+2}$$

2) $\frac{8m-48}{m-6}$

$$8$$

3) $\frac{10p-50}{5-p}$

$$-10$$

4) $\frac{24v}{30v-36}$

$$\frac{4v}{5v-6}$$

5) $\frac{50}{35x-25}$

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

6) $\frac{56p^2+8p}{16p^2}$

$$\frac{7p+1}{2p}$$

7) $\frac{x^2+x-20}{4x^2+20x}$

$$\frac{x-4}{4x}$$

8) $\frac{n^2+12n+32}{n^2+6n-16}$

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

9) $\frac{x^2+11x+24}{x^2+9x+18}$

$$\frac{x+8}{x+6}$$

10) $\frac{a^2-19a+90}{5a^2-50a}$

$$\frac{a-9}{5a}$$

$$11) \frac{10x^2 + 25x}{25x^2 - 45x}$$
$$\frac{2x + 5}{5x - 9}$$

$$12) \frac{n^2 - 3n - 40}{8n^2 - 64n}$$
$$\frac{n + 5}{8n}$$

$$13) \frac{10x - 6}{14x + 20}$$
$$\frac{5x - 3}{7x + 10}$$

$$14) \frac{2r + 4}{r^2 - 4r - 12}$$
$$\frac{2}{r - 6}$$

$$15) \frac{v^2 - 8v + 12}{v^2 + 4v - 12}$$
$$\frac{v - 6}{v + 6}$$

$$16) \frac{p^2 - 12p + 36}{p^2 - 10p + 24}$$
$$\frac{p - 6}{p - 4}$$

$$17) \frac{a - 3}{8a - 24}$$
$$\frac{1}{8}$$

$$18) \frac{x - 1}{3x^2 - 3x}$$
$$\frac{1}{3x}$$

$$19) \frac{72x}{40x^2 - 24x}$$
$$\frac{9}{5x - 3}$$

$$20) \frac{3x^2 + 23x - 70}{x + 10}$$
$$3x - 7$$