

Simplifying, Multi., Dividing Rational Expressions Date _____ Period _____

Simplify each expression.

1) $\frac{k^2 + 4k - 21}{8k - 24}$

2) $\frac{4m^2 + 8m}{m^2 + 12m + 20}$

3) $\frac{n^2 - 7n - 8}{n^2 - 4n - 5}$

4) $\frac{m^2 - m - 42}{m^2 + 10m + 24}$

5) $\frac{-m^2 + 11m - 18}{5m - 10}$

6) $\frac{4x + 24}{x^2 - 36}$

7) $\frac{6x - 54}{x^2 - 17x + 72}$

8) $\frac{63n - 9n^2}{n^2 - 12n + 35}$

9) $\frac{50x - 40}{50x - 60}$

10) $\frac{v^2 - 5v + 4}{v^2 - 13v + 36}$

11)
$$\frac{3}{6n^2 + 15n} \div \frac{1}{6n^2 + 15n}$$

12)
$$\frac{6x + 6}{6} \div \frac{x^2 - 1}{3}$$

13)
$$\frac{n + 5}{6} \cdot \frac{7}{7n + 21}$$

14)
$$\frac{7k^3 - 21k^2}{18 - 3k - k^2} \div \frac{k - 4}{k + 6}$$

15)
$$\frac{8p}{2} \cdot \frac{10p}{8p^2 + 16p}$$

16)
$$\frac{8}{8x + 32} \div \frac{1}{2x}$$

17)
$$\frac{5}{x + 4} \div \frac{6x - 54}{x^2 - 5x - 36}$$

18)
$$\frac{1}{m - 2} \cdot \frac{8m^2 - 16m}{3m}$$

19)
$$\frac{1}{m - 9} \div \frac{m^2 + 5m - 36}{3m^2 + 27m}$$

20)
$$\frac{4}{v + 5} \cdot \frac{4v + 20}{4}$$