

Review: Operations with Rational Expressions**Simplifying**

1.
$$\frac{6x^3 + 6x^2}{2x^3 - 2x}$$

2.
$$\frac{4n^2 - 12n + 9}{2n^2 + 15n - 27}$$

Multiplying & Dividing

3.
$$\frac{42a^2 - 24a}{21a - 12} \cdot \frac{3a - 9}{6a^2 + 24a}$$

4.
$$\frac{49 - y^2}{6y^2 + 42y} \cdot \frac{48y^3}{y^2 - 10y + 21}$$

5.
$$\frac{w^2 - 81}{4w^2 + 27w - 7} \div \frac{w^2 - 5w - 36}{w^2 + 11w + 28}$$

6.
$$\frac{30c^3 - 60c^2}{3c} \div (2c^3 - 16c^2 + 24c)$$

Adding & Subtracting

7.
$$\frac{17k + 3}{8k + 4} + \frac{3k + 7}{8k + 4}$$

8.
$$\frac{9m - 12}{m^2 - 25} - \frac{m + 28}{m^2 - 25}$$

$$9. \frac{3}{12y} + \frac{9}{24}$$

$$10. \frac{p^2 + 2p - 51}{p^2 - 6p - 27} - \frac{4}{p + 3}$$

$$11. \frac{r}{r+6} - \frac{1}{r}$$

$$12. \frac{3}{h-2} + \frac{5}{h-5}$$

$$15. \frac{7r+5}{r^2-10r-24} - \frac{4r-1}{r^2-10r-24}$$

$$16. \frac{x^2+15}{x^2-64} + \frac{13x}{x^2-64} - \frac{2x-9}{x^2-64}$$

$$17. \frac{9}{4w} - \frac{7}{5w}$$

$$18. \frac{h-21}{2h-10} + \frac{h+3}{h-5}$$

$$19. \frac{x^2+4}{x^2-7x+6} - \frac{8}{x-6}$$

$$20. \frac{13m+21}{6m^2+5m-4} + \frac{1}{3m+4}$$