

Name : _____

Score : _____

Teacher : _____

Date : _____

Adding and Subtracting Rational Expressions

Add or Subtract the two expressions in each problem.

1) $1 - \frac{d - 3}{d^2 + 9d + 18}$

6) $\frac{4z^3 - 8}{5z^5 - 15z^3} - \frac{8z^3 + 4}{5z^5 - 15z^3}$

2) $\frac{7y^3 + 4}{3y^4 + 8} + \frac{2y^3}{3y^4 + 8}$

7) $\frac{r}{2} - \frac{5r + 4}{r + 9}$

3) $-4 - \frac{h - 8}{h^2 + 14h + 48}$

8) $\frac{s}{7} + \frac{6s + 4}{s + 8}$

4) $\frac{2p + 7}{p^2 - 6p - 7} + \frac{3p}{5p}$

9) $\frac{2q + 9}{7q^4 + 15q} - \frac{5q - 8}{7q^4 + 15q}$

5) $\frac{8c + 7}{6c^2 + 7} + \frac{4c}{6c^2 + 7}$

10) $\frac{n + 7}{n^2 - 16n + 63} + \frac{7n}{5n}$



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Add or Subtract the two expressions in each problem.

$$1) \quad 1 - \frac{d - 3}{d^2 + 9d + 18}$$

$$\frac{d^2 + 8d + 21}{(d + 6)(d + 3)}$$

$$6) \quad \frac{4z^3 - 8}{5z^5 - 15z^3} - \frac{8z^3 + 4}{5z^5 - 15z^3}$$

$$\frac{4(-z^3 - 3)}{5z^3(z^2 - 3)}$$

$$2) \quad \frac{7y^3 + 4}{3y^4 + 8} + \frac{2y^3}{3y^4 + 8}$$

$$\frac{9y^3 + 4}{3y^4 + 8}$$

$$7) \quad \frac{r}{2} - \frac{5r + 4}{r + 9}$$

$$\frac{r^2 - r - 8}{2(r + 9)}$$

$$3) \quad -4 - \frac{h - 8}{h^2 + 14h + 48}$$

$$-\frac{4h^2 + 57h + 184}{(h + 6)(h + 8)}$$

$$8) \quad \frac{s}{7} + \frac{6s + 4}{s + 8}$$

$$\frac{s^2 + 50s + 28}{7(s + 8)}$$

$$4) \quad \frac{2p + 7}{p^2 - 6p - 7} + \frac{3p}{5p}$$

$$\frac{3p^2 - 8p + 14}{5(p + 1)(p - 7)}$$

$$9) \quad \frac{2q + 9}{7q^4 + 15q} - \frac{5q - 8}{7q^4 + 15q}$$

$$\frac{-3q + 17}{q(7q^3 + 15)}$$

$$5) \quad \frac{8c + 7}{6c^2 + 7} + \frac{4c}{6c^2 + 7}$$

$$\frac{12c + 7}{6c^2 + 7}$$

$$10) \quad \frac{n + 7}{n^2 - 16n + 63} + \frac{7n}{5n}$$

$$\frac{7n^2 - 107n + 476}{5(n - 9)(n - 7)}$$

