

Name : _____

Score : _____

Teacher : _____

Date : _____

Adding and Subtracting Rational Expressions

Add or Subtract the two expressions in each problem.

$$1) \quad \frac{z + 9}{z^2 - 14z + 45} - \frac{8z}{3z}$$

$$6) \quad \frac{6x + 9}{2x^7 - 15x} - \frac{5x + 3}{2x^7 - 15x}$$

$$2) \quad \frac{8g + 5}{3g^2 - 11} - \frac{7g}{3g^2 - 11}$$

$$7) \quad \frac{2c + 4}{8c^6 - 17} - \frac{7c}{8c^6 - 17}$$

$$3) \quad -3 - \frac{y - 1}{y^2 + 10y + 9}$$

$$8) \quad \frac{2r}{9} - \frac{3r + 4}{8r + 6}$$

$$4) \quad \frac{b}{b + 8} - \frac{3}{8b + 5}$$

$$9) \quad 2 - \frac{n + 1}{n^2 - 7n + 6}$$

$$5) \quad \frac{k}{9} - \frac{5k + 3}{k + 7}$$

$$10) \quad \frac{4d}{6d + 9} - \frac{3}{5d + 4}$$



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Add or Subtract the two expressions in each problem.

$$1) \quad \frac{z+9}{z^2-14z+45} - \frac{8z}{3z}$$

$$= \frac{8z^2 - 115z + 333}{3(z-5)(z-9)}$$

$$6) \quad \frac{6x+9}{2x^7-15x} - \frac{5x+3}{2x^7-15x}$$

$$= \frac{x+6}{x(2x^6-15)}$$

$$2) \quad \frac{8g+5}{3g^2-11} - \frac{7g}{3g^2-11}$$

$$= \frac{g+5}{3g^2-11}$$

$$7) \quad \frac{2c+4}{8c^6-17} - \frac{7c}{8c^6-17}$$

$$= \frac{-5c+4}{8c^6-17}$$

$$3) \quad -3 - \frac{y-1}{y^2+10y+9}$$

$$= \frac{3y^2+31y+26}{(y+9)(y+1)}$$

$$8) \quad \frac{2r}{9} - \frac{3r+4}{8r+6}$$

$$= \frac{16r^2-15r-36}{18(4r+3)}$$

$$4) \quad \frac{b}{b+8} - \frac{3}{8b+5}$$

$$= \frac{2(4b^2+b-12)}{(b+8)(8b+5)}$$

$$9) \quad 2 - \frac{n+1}{n^2-7n+6}$$

$$= \frac{2n^2-15n+11}{(n-6)(n-1)}$$

$$5) \quad \frac{k}{9} - \frac{5k+3}{k+7}$$

$$= \frac{k^2-38k-27}{9(k+7)}$$

$$10) \quad \frac{4d}{6d+9} - \frac{3}{5d+4}$$

$$= \frac{20d^2-2d-27}{3(2d+3)(5d+4)}$$

