Name: .....

Date: ..... Score: .....

MATH MONKS

Adding and Subtracting Rational Expressions: Unlike Denominators

Simplify each expression:

1. $\frac{5y}{6} - \frac{2x}{5y^3}$

2. $\frac{7x}{x-6} + \frac{42}{6-x}$

3. $\frac{6r}{r+5} - \frac{4r}{r-1}$

4. $\frac{2x}{x+2} - \frac{6}{x+6}$

5. $\frac{4x}{x-4} - \frac{3x}{x-2}$

6. $\frac{4}{5x+7} + \frac{7}{6x}$

7. $\frac{2x}{16x^2-4x} + \frac{4}{2x-1}$

8. $4 - \frac{p}{p-4}$

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MATH MONKS

Adding and Subtracting Rational Expressions: Unlike Denominators

Answers

1 $\frac{5y}{6} - \frac{2x}{5y^3}$

$= \frac{25y^4 - 12x}{30y^3}$

2 $\frac{7x}{x-6} + \frac{42}{6-x}$

$= \frac{-7x^4 + 84x - 252}{-x^2 + 12x - 36}$

3 $\frac{6r}{r+5} - \frac{4r}{r-1}$

$= \frac{2r(r - 26)}{r^2 + 4r - 5}$

4 $\frac{2x}{x+2} - \frac{6}{x+6}$

$= \frac{2(x^2 + 3x - 6)}{x^2 + 8x + 12}$

5 $\frac{4x}{x-4} - \frac{3x}{x-2}$

$= \frac{x^2 + 4x}{x^2 - 6x + 8}$

6 $\frac{4}{5x+7} + \frac{7}{6x}$

$= \frac{59x + 49}{6x(5x + 7)}$

7 $\frac{2x}{16x^2 - 4x} + \frac{4}{2x-1}$

$= \frac{34x^2 - 9x}{2(8x^3 - 6x + x)}$

8 $4 - \frac{p}{p-4}$

$= \frac{3p - 16}{p - 4}$