

denominator with 'repeated factors'

decompose the following expressions:

1.

$$\frac{x+1}{(x+2)(x-3)^2}$$

2.

$$\frac{x-3}{(x+5)(x+2)^2}$$

3.

$$\frac{2x+5}{(x+1)^2(x-3)}$$

4.

$$\frac{3x-3}{(x-2)^2(x+1)}$$

5.

$$\frac{2x-1}{(3x-3)^2(x-2)}$$

6.

$$\frac{5x+2}{(2x-1)(x+7)^2}$$

7.

$$\frac{2x-5}{(3x+1)^2(5x-2)}$$

8.

$$\frac{3x-1}{(2x-2)^2(5x+1)}$$

9.

$$\frac{3-2x}{(1-2x)(3x+2)^2}$$

10.

$$\frac{1-5x}{(2x-2)^2(3-2x)}$$

denominator with 'repeated factors'

answers:

1.
$$\frac{4}{5(x-3)^2} + \frac{1}{25(x-3)} - \frac{1}{25(x+2)}$$

2.
$$\frac{8}{9(x+2)} - \frac{8}{9(x+5)} - \frac{5}{3(x+2)^2}$$

3.
$$\frac{11}{16(x-3)} - \frac{3}{4(x+1)^2} - \frac{11}{16(x+1)}$$

4.
$$\frac{1}{(x-2)^2} + \frac{2}{3(x-2)} - \frac{2}{3(x+1)}$$

5.
$$\frac{1}{3(x-2)} - \frac{1}{9(x-1)^2} - \frac{1}{3(x-1)}$$

6.
$$\frac{2}{25(2x-1)} - \frac{1}{25(x+7)} + \frac{11}{5(x+7)^2}$$

7.
$$\frac{63}{121(3x+1)} + \frac{17}{11(3x+1)^2} - \frac{105}{121(5x-2)}$$

8.
$$\frac{1}{18(x-1)} + \frac{1}{12(x-1)^2} - \frac{5}{18(5x+1)}$$

9.
$$\frac{12}{49(3x+2)} + \frac{13}{7(3x+2)^2} - \frac{8}{49(2x-1)}$$

10.
$$\frac{13}{2(2x-3)} - \frac{13}{4(x-1)} - \frac{1}{(x-1)^2}$$