



Q6 $\frac{x+7}{(x-2)(x-1)}$

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

$$\frac{A(x-1)}{x-2} + \frac{B(x-2)}{(x-1)} = x+7$$

$$x+7 = A(x-1) + B(x-2)$$

let $x=1$

$$1+7 = A(0) + B(1-2)$$

$$8 = B(-1)$$

$$B = \frac{8}{-1} = -8 \quad B = -8$$

let $x=2$

$$x+7 = A(x-1) + B(x-2)$$

$$2+7 = A(2-1) + B(0)$$

$$9 = A(1)$$

$$A = \frac{9}{1} = 9 \quad A = 9$$

$$\boxed{= \frac{9}{(x-2)} + \frac{-8}{(x-1)}}$$