

Q6

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

$$\frac{A}{x-2} \quad \swarrow \quad \searrow \quad \frac{B}{x-1}$$

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

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

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

$$\text{let } x = +1$$

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

$$8 = -2A + B$$

$$\frac{8}{-2} A = -4$$

$$\text{let } x = +2 \quad 2+7 = A(+2-1) + B(+2-2)$$

$$9 = A(1) + B(0)$$

$$A = 9$$