

$$b) \quad 3x^2 - 7x + 4 = (x-1)(ax+b)$$

$$3x^2 - 7x + 4 = ax^2 + bx - ax - b$$

$$3x^2 - 7x + 4 = ax^2 + \underbrace{bx - ax}_{(b-a)x} - b$$

for both expressions to be equal (identical)

Coefficient of  $x^2$ :  $3 = a$  ✓

of  $x$ :  $-7 = (b-a)$  ✓  
 $b - 3 = -7$

$$b = -4$$

constant:  $4 = -b$

$$b = -4$$

$$\boxed{\begin{matrix} a = 3 \\ b = -4 \end{matrix}}$$

$$c) \quad DJ = \frac{1}{3}$$

$$\frac{2x - x^2}{4-x} \times \frac{1}{3}$$

$$3(2x - x^2) = 4 - x$$

$$6x - 3x^2 = 4 - x$$

$$6x + x - 3x^2 - 4 = 0$$

$$7x - 3x^2 - 4 = 0$$

~~$$3x^2 - 4x + 4 = 0$$~~

$$-3x^2 + 4x + 3x - 4 = 0$$

$$-3x(x-1) + 4(x-1) = 0$$

$$(x-1)(-3x+4) = 0$$

$x=1$  or  
accepted

$$x = \frac{4}{3} \text{ rejected}$$

$$0 < x < 2$$

P. 11.