Question 5 **(Suggested maximum time: 10 minutes)**

(a) Work out the value of $3p - 4t^2$, when $p = 6$ and $t = 5$.

(b) Multiply out and simplify $(2x - 3)(4 - 5x + x^2)$.

(c) Factorise fully $10de - df - 5ef + 2d^2$.

Question 12 **(Suggested maximum time: 20 minutes)**

(a) Factorise $n^2 - 11n + 18$.

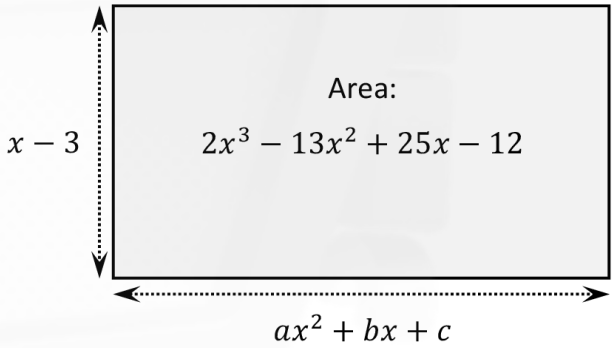
(b) Factorise fully $wy - y - 1 + w$.

(c) Find the value of $\frac{5}{3x-2} - \frac{7}{6x-12}$, when $x = 4$.

(d) Use factorisation to simplify $\frac{4e^2-9}{2e^2+3e-9}$.

(e) A rectangle has sides of length $x-3$ units and ax^2+bx+c units, where $a, b, c \in \mathbb{Z}$.
The **area** of the rectangle is $2x^3-13x^2+25x-12$ square units.

Find the value of a, the value of b, and the value of c.



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(b) Factorise fully $ac-ad-bd+bc$.

(a) Factorise fully $9a^2 - 6ab + 12ac - 8bc$.

(b) Factorise $9x^2 - 16y^2$.

(c) Use factors to simplify the following: $\dfrac{2x^2 + 4x}{2x^2 + x - 6}$.