## Exercise 37

Given the function $f(x) = x^2 - 3x$:

(a) Evaluate $f(5)$.

(b) Solve $f(x) = 4$.

---

**Solution**

Evaluate the given function at $x = 5$.

$$f(5) = (5)^2 - 3(5) = 25 - 15 = 10 \quad \rightarrow \quad \boxed{f(5) = 10}$$

Plug in 4 for $f(x)$ and solve the equation for $x$.

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

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

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

$$\boxed{x = \{-1, 4\}}$$