41 The graph has an equation of the form $y = k(x - a)(x - b)$. What is the equation of the graph?
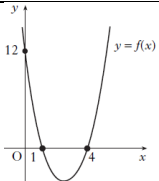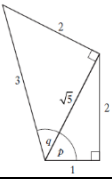

42

For what values of x is $6 + x - x^2 < 0$?

43

Express $\log_a 25 + \log_a 4 - \log_a 20$ as the logarithm of a single number.

44

Solve $cos2x - 3cosx + 2 = 0$ for $0 \le x < 360$.

45 The diagram shows two right-angled triangles with sides and angles given. What is the value of $\sin(p + q)$?

46

What is the derivative of $(x^3 + 4)^2$?

47 The point $P(5, 12)$ lies on the curve with equation $y = x^2 - 4x + 7$. Find the equation of the tangent to the curve.

48 Find $\int 4 \sin(2x + 3) \, dx$.

49 Find $\int_{-2}^{2} (x + 1)^2 \, dx$.

50

Write $2sinx° + 3cosx°$ in the form $ksin(x - a)$, for $k > 0$ and $0 \le a \le 360$.