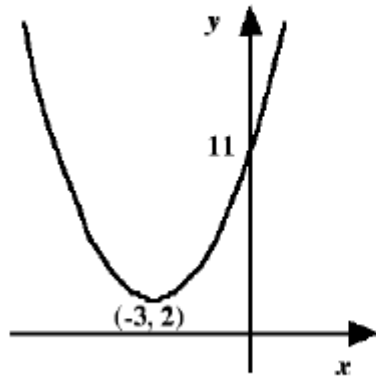


SQA Higher Grade Exams 2003
Higher Paper 1 (Non-Calculator) Answers

1 $4y - x = 13$

2 (a) $(x+3)^2 + 2$ (b)



3 $u \cdot v = 0 \Rightarrow$ perpendicular

4 (a) $p = \frac{1}{3}$, $q = 11$ (b) $\frac{33}{2}$

5 $\frac{3}{16}$

6 $D(8, 3, -1)$

7 set equal $\Rightarrow x^2 + x + 3 = 0 \Rightarrow \text{Discr} = -11 < 0$
 \Rightarrow no real roots \Rightarrow no points of intersection

8 $\frac{2}{3}$

9 (a) $\frac{1}{2x-1}$ (b) $x \neq \frac{1}{2}$

10 (a) (i) $\frac{4}{5}$ (ii) $\frac{3}{5}$ (b) $\tan 2p = \frac{4}{3}$

11 (a) (i) $A(12, -5)$; 13 (ii) $(x-24)^2 + y^2 = 64$

(b) $q = -24$; $p = \frac{5}{144}$

12 $1 + \log_e 8 - \log_e 9$