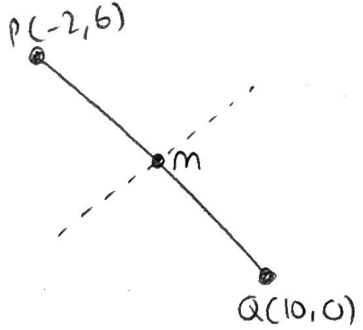
2.



$M(4, 3)$

$$m_{PQ} = \frac{0-6}{10+2}$$

$$= \frac{-6}{12}$$

$$= -\frac{1}{2}$$

$$m_{perp} = 2$$

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

$$y - 3 = 2x - 8 \longrightarrow y = 2x - 5$$

Question			Generic scheme	Illustrative scheme	Max mark
2.			$\bullet^1$ find midpoint of PQ $\bullet^2$ calculate gradient of PQ $\bullet^3$ state perpendicular gradient $\bullet^4$ determine equation of perpendicular bisector	$\bullet^1$ $(4,3)$ $\bullet^2$ $-\frac{1}{2}$ or $-\frac{6}{12}$ $\bullet^3$ 2 stated or implied by $\bullet^4$ $\bullet^4$ $y=2x-5$	**4**
Notes:					
1. $\bullet^4$ is only available as a consequence of using a perpendicular gradient **and** a midpoint. 2. The gradient of the perpendicular bisector must appear in fully simplified form at $\bullet^3$ or $\bullet^4$ stage for $\bullet^4$ to be awarded. 3. At $\bullet^4$, accept $2x-y=5$, $y-2x=-5$ or any other rearrangement of the equation where the constant terms have been simplified.					
Commonly Observed Responses:					