4. $y = x^{3/2} - 2x^{-1}$

$$\frac{dy}{dx} = \frac{3}{2}x^{1/2} + 2x^{-2}$$

Question			Generic scheme	Illustrative scheme	Max mark
4.			$\bullet^1$ express first term in differentiable form $\bullet^2$ differentiate first term $\bullet^3$ differentiate second term	$\bullet^1$ $y = x^{\frac{3}{2}} \ldots$ stated or implied by $\bullet^2$ $\bullet^2$ $\frac{3}{2}x^{\frac{1}{2}} \ldots$ $\bullet^3$ $\ldots + 2x^{-2}$	**3**

Notes:

1. $\bullet^2$ is only available for differentiating a term with a fractional index.
2. Where candidates attempt to integrate throughout, only $\bullet^1$ is available.

Commonly Observed Responses:

Candidate A – differentiating over two lines

$y = x^{\frac{3}{2}} + 2x^{-2}$ $\bullet^1$ ✓

$y = \frac{3}{2}x^{\frac{1}{2}} + 2x^{-2}$ $\bullet^2$ ✓ $\bullet^3$ ✗