mathematical studies studies was a state of the state of

ERRATA

MATHEMATICS FOR YEAR 12 MATHEMATICAL STUDIES – SECOND EDITION WORKED SOLUTIONS

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15 b
$$(x-2)(x^2-4x-6) = 0$$

 $\therefore x = 2 \text{ or } \frac{4 \pm \sqrt{16-4(1)(-6)}}{2} = \frac{4 \pm \sqrt{40}}{2}$
 $\therefore x = 2 \text{ or } 2 \pm \sqrt{10}$

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2 b
$$y = \frac{8}{x^2}$$
 at $x = 9$
 $f(x) = 8x^{-2}$
 $\therefore f'(x) = -16x^{-3} = -\frac{16}{x^3}$
and so $f'(9) = -\frac{16}{729}$
 \therefore tangent has slope of $-\frac{16}{729}$