

Int 2 2001 Paper 1 (Non Calc)

1. $(x + 5)(x - 3)$
2. $y = 10x + 5$
3. $(3, -1)$
4. $R = \sqrt{\frac{p+5}{b}}$
5. (a) (i) $Q_2 = 52$
(ii) $Q_1 = 39$ $Q_3 = 61.5$
(iii) Semi IQR = 11.25
(b) $\text{prob}(>80) = \frac{2}{33}$
6. $b = 3$
7. Proof;
Hint:
perimeter of square = $8x + 8$
perimeter of rectangle = $2x + 6 + 2L$
8. (a) $\frac{2-2x}{x(x+2)}$
(b) $8\sqrt{2}$

Int 2 2001 Paper 2

1. 581 000 (nearest 1000)
2. mean = 60
 $s = 11.03$
(b) mean the same
much more spread in the marks
because s is 29.8 compared with
only 11.03.
3. (a)

.
:	:	:	:	:	:	:	:	:	:
41	42	43	44	45	46	47	48	49	50

 (b) Symmetrical distribution
(c) Average contents = 45
4. $h = 8.53$ km
5. (a) $(2, -9)$
(b) $C(0, -5)$
(c) $B(5, 0)$ by symmetry
6. (a) $63\ 000\ \text{cm}^3$ (2 s.f.)
(b) $h = 8.4$ cm
7. $2x^3 + 11x^2 + 11x - 4$
8. Area = $237.8\ \text{cm}^2$
9. (a) $2a^{\frac{3}{2}} + a^3$
(b) $x = 1.1$ or -2.1
10. sector = 191.9 cm
Perimeter = 466.8 cm
11. (a) 128.7° or 308.7°
(b) Proof:

Hint: $\frac{\sin x}{\cos x} = \tan x$