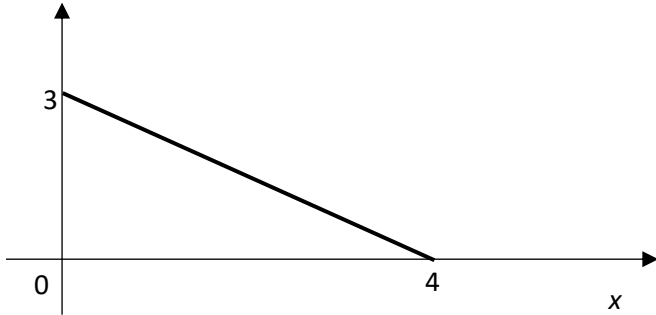
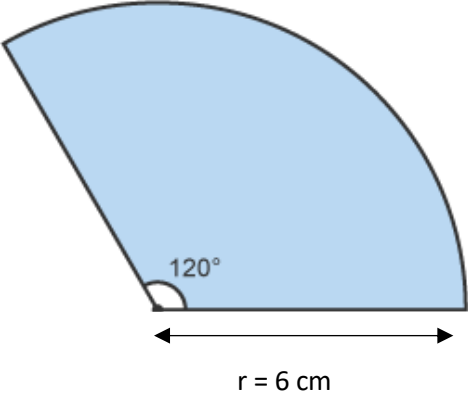
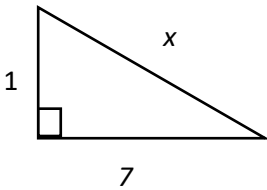
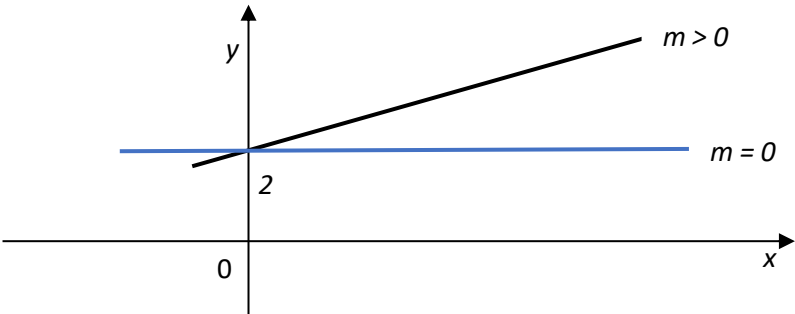


S3 Nat 5 Non-Calculator Revision - Paper E		30
1	Evaluate $3\frac{5}{8} - 1\frac{2}{7}$	2
2	Multiply the brackets and collect like terms $(x + 1)(3x^2 + x - 2)$	3
3	Factorise (a) $x^2 - 9$ (b) $2x^2 - 18$	2
4	Write $x^2 - 2x + 5$ in completed square form $(x + a)^2 + b$	2
5	 <p>Find the equation of the straight line which passes through the points (0,3) and (4,0).</p>	3
6	 <p>Shown to the left is a sector of a circle with a centre angle of <math>120^\circ</math> and a radius of 6 cm.</p> <p>Using <math>\pi = 3.14</math> find the area of this sector</p>	3
7	There are 72 000 spectators at a large sporting event. This represents 90% capacity. How many spectators could have attended the event?	3
8	$L = \sqrt{t} + 2c$ Change the subject of the formula to $c$	2
9	A straight line is represented by the equation $y = mx + 2$ Sketch a possible straight line graph when: (a) $m > 0$ (b) $m = 0$	3
10	Simplify $(10c^2) \times (2c^3)^2$	3

11	For the right-angled triangle below find a value for $x$  Express your answer as a surd in the simplest form		4
----	--	---	---

Paper D - Answers			30
1	$2\frac{19}{56}$	2	$3x^3 + x^2 - 2x + 3x^2 + x - 2 = 3x^3 + 4x^2 - x - 2$
3	(a) $(x + 3)(x - 3)$	(b)	$2(x + 3)(x - 3)$
4	$(x - 1)^2 + 4$	5	$y = -\frac{3}{4}x + 3$
6	Area of sector = $\frac{120}{360} \times \pi \times 6^2 = \frac{1}{3} \times \pi \times 36 = 12\pi = 37.68 \text{ cm}^2$		
7	90% = 72 000, 100% = 80 000	8	$c = \frac{L - \sqrt{t}}{2}$
9			
10	$10c^2 \times 4c^6 = 40c^8$	11	$x^2 = 7^2 + 1^2, x^2 = 50, x = \sqrt{50} = 5\sqrt{2}$

Extra practice from the **Leckie and Leckie Books**

1	Fractions	Page 342 Q2
2	Expanding brackets	Page 33 Q1
3	Factorising	Page 38 Q2
4	Completing the square	Page 43 Q3
5	Equation of a straight line	Page 97 Q1 and 2
6	Area of a sector	PAGE 70 q2
7	Reverse Percentages	Page 337 Q4 - 6
8	Changing the subject of a formula	Page 136 Q3 and 4
10	Indices	Page 19 Q3
11	Surds	Page 9 Q2.