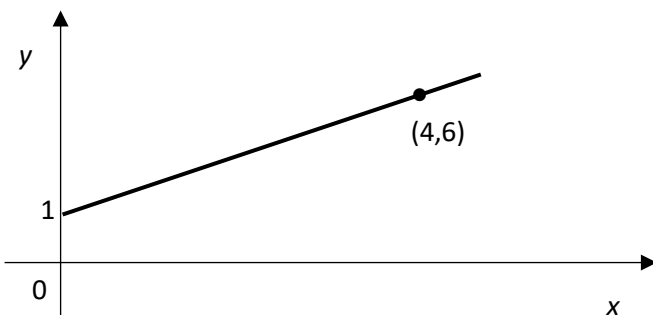
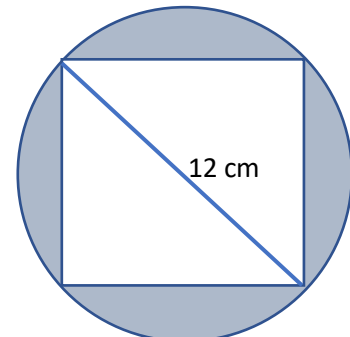


S3 Nat 5 Non-Calculator Revision - Paper D		30
1	Evaluate $1\frac{1}{8} \times 3\frac{1}{5}$	2
2	Evaluate (a) $(2^3)^2$ (b) $2^{-2}$	4
3	Remove the brackets and simplify $(7x^5 + 1)(7x^5 - 1)$	3
4	Factorise $x^2 + 11x - 60$	2
5	Write $x^2 + 8x - 6$ in completed square form $(x + a)^2 + b$	2
6	<p>A straight line passes through the points (0,1) and (4,6).</p>  <p>Find the equation of the straight line in the simplest form.</p>	3
7.	Hannah buys an antique mirror for £200. It is expected to rise in value by 5% each year. Calculate the value of the mirror after 2 years?	3
8.	$P = 4 + \frac{W}{5}$ Change the subject of the formula to W	2
9.	The price for Dylan's summer holiday is £810. This price includes a 10% discount. What is the price of his holiday without this discount?	3
10	<p>The shape below shows a square <math>x</math> cm by <math>x</math> cm inside a circle.</p> <p>The diameter of the circle is 12cm.</p>  <p>(a) Find an exact value for <math>x</math> (in surd form)</p> <p>(b) Find an expression for the shaded area in terms of <math>\pi</math></p>	<p>4</p> <p>2</p>

Paper D - Answers			30
1	$\frac{9}{8} \times \frac{16}{5} = \frac{18}{5}$	2	(a) $2^6 = 64$ (b) $\frac{1}{4}$
3	$49x^{10} - 7x^5 + 7x^5 - 1 = 49x^{10} - 1$		
4	$(x-4)(x+15)$	5	$(x+4)^2 - 22$
6	$m = \frac{5}{4}$ , y-intercept is (0,1)      equation of straight line is $y = \frac{5}{4}x + 1$		
7	200 + 5% of 200 = 200 + 10 = 210 210 + 5% of 210 = 210 + 10.5 = £220.50		
8	$W = 5P - 20$ or $W = 5(P - 4)$	9	90% = £810, 100% = £900 is
10a	By Pythagoras $12^2 = x^2 + x^2$ , $144 = 2x^2$ $144 = 2x^2$ $72 = x^2$ $\sqrt{72} = x$ $x = 6\sqrt{2}$	10b	Area of circle is $\pi \times 6^2 = 36\pi$  Area of square is $x^2$  shaded area is $36\pi - x^2$

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

1	Fractions	Page 342 Q1
2	Indices	Page 20/21 Q3 and 4
3	Expanding Brackets	Page 22 Q4
4	Factorising	Page 39 Q1
5	Completing the square	Page 43 Q2
6	Straight lines	Page 98/99 Q3
7	Percentage increase	Page 330 Q1 - 3
8	Changing the subject of the formula	Page 136 Q2
9	Reverse percentages	Page 337 Q1 - 3
10	Surds	Page 9 Q7