

Lighthouse 9 (Checkpoint 2)

1. Complete the trig value table

	45	60	30
Tan			
Cos			
sin			

2. Rationalise the denominator $\frac{2}{1-\sqrt{3}}$

3. $a = 0.42$ is given correct to two sig figs.
 $b = 1300$ given correct to three sig figs
 For $a - b$ what is the
 a) Upper bound? b) Lower bound?

4. Calculate (leave your answer in standard form)

$$(2 \times 10^6) \div (8 \times 10^2) + (3 \times 10^2) \times (3 \times 10^3)$$

5. What decimal multiplier could be used to find a 22% decrease over two years of compound depreciation?

6. What is the perimeter of the sector of a circle with radius of 8 cm and angle 60° ?
 Give your answer in terms of π

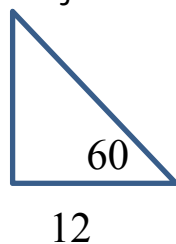
7. Find the coordinates where these graphs intersect:
 $2x^2 - y = 5$ $x + y = 1$

8. Q(5, 13) and R(7, 19) are the ends of a line segment
 Find the equation of the line, the length of the line and the equation of the perpendicular bisector.

9. Factorise and solve

a) $6a^2 + 7a + 2 = 0$ b) $25a^2 - 81 = 0$

10. Find the area of the triangle



x	f	fd
$0 \leq x \leq 10$	9	
$10 \leq x \leq 15$		3
$15 \leq x \leq ?$	16	4

11. Find the missing values for the histogram.

12. Prove that a hexagon and two octagons do not tessellate.