

Lighthouse 9 (Checkpoint 6)

1. Complete the trig value table

	60	30	45
tan			
sin			
cos			

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

3. $a = 1.2$ is given correct to two sig figs.
 $b = 1000$ given correct to three sig figs
 For $b - a$ what is the
 a) Upper bound? b) Lower bound?

4. Calculate (leave your answer in standard form)

$$(3 \times 10^8) \div (2 \times 10^6) + (2 \times 10^{-2}) \times (8 \times 10^5)$$

5. What decimal multiplier could be used to find a 29% decrease over two years of compound depreciation?

6. What is the perimeter of the sector of a circle with radius of 6 cm and angle 72° ?
 Give your answer in terms of π

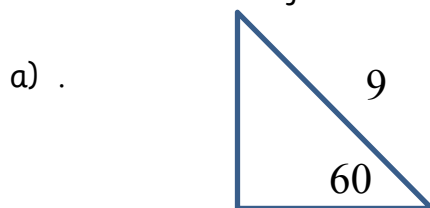
7. Find the coordinates where these graphs intersect:
 $5x + 3 = y$ $x^2 = (y - 5)/2$

8. Q(2, 17) and R(14, 89) 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) $6a^2 - 25a - 9 = 0$ b) $49a^2 - 64 = 0$

10. Find the area of the triangle



x	f	fd
$0 \leq x \leq 10$	12	
$10 \leq x \leq 15$		3.4
$15 \leq x \leq ?$	35	0.2

11. Find the missing values for the histogram.

12. Prove that no amount of octagons tessellate on their own.