

Lighthouse 9 (Checkpoint 3)

1. Complete the trig value table

	45	60	30
cos			
sin			
tan			

2. Rationalise the denominator $\frac{2}{3-\sqrt{5}}$

3. $a = 120$ is given truncated to two sig figs.
 $b = 3900$ 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)

$$(3 \times 10^8) \div (4 \times 10^4) + (9 \times 10^{-2}) \times (5 \times 10^7)$$

5. What decimal multiplier could be used to find a 18% decrease over two years of compound depreciation?

6. What is the perimeter of the sector of a circle with radius of 7 cm and angle 45° ?
 Give your answer in terms of π

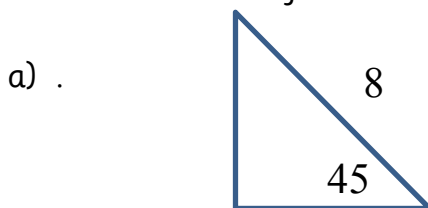
7. Find the coordinates where these graphs intersect:
 $x^2 + y^2 = 25$ $x + y = 1$

8. Q(4, 26) and R(10, 56) 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) $4a^2 + 4a - 15 = 0$ b) $49a^2 - 64 = 0$

10. Find the area of the triangle



x	f	fd
$0 \leq x \leq 10$	8	
$10 \leq x \leq 15$		3
$15 \leq x \leq$	7	0.5

11. Find the missing values for the histogram.

12. Prove that a square and two regular hexagons do not tessellate.