

ANSWERS

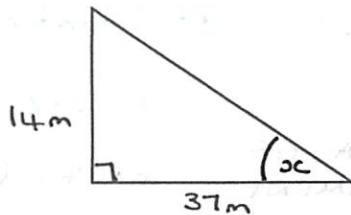
SPECIFICALLY CALCULATOR

1. Find the mean mark for the 30 students to 3 sig. figs.

MARK x	Frequency f	$f \times x$
13	2	26
14	5	70
15	6	90
16	8	128
17	7	119
18	2	36
	<u>30</u>	<u>469</u>

$$\begin{aligned} \text{mean} &= \frac{469}{30} \\ &= \underline{\underline{15.6}} \end{aligned}$$

2. Find the value of x to 2 d.p's



$$\tan x = \frac{O}{A}$$

$$\tan x = \frac{14}{37}$$

$$x = \tan^{-1} \frac{14}{37}$$

$$x = \underline{\underline{20.73^\circ}}$$

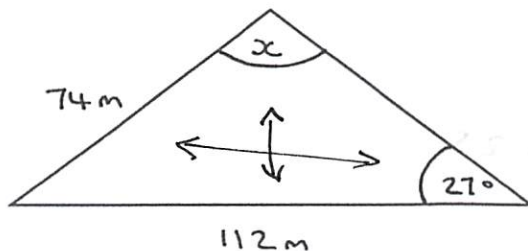
For question 3 & 4, use a calculator for this worksheet ONLY, to practise using the buttons. In the exam show workings.

3. Find the product of prime factors for 210 = $2 \times 3 \times 5 \times 7$

4. $3\frac{1}{7} \times 2\frac{2}{5} = 7\frac{19}{35}$

5. £50,000 is invested at a compound interest rate of 3%, what is the value after 6 years, to the nearest penny? = £59,702.61 ← $(50000)(1+3\%)^6$

6. Find the value of x , to the nearest ten



SINE RULE MISSING ANGLE

$$\frac{\sin x}{112} = \frac{\sin 27}{74}$$

$$\sin x = \frac{\sin 27}{74} \times 112$$

$$x = \sin^{-1} \left(\frac{\sin 27}{74} \times 112 \right)$$

$$x = \underline{\underline{40^\circ}}$$

$$x = \frac{3 \pm \sqrt{(-3)^2 - 4(2)(-4)}}{2 \times 2}$$

7. Solve $2x^2 - 3x - 4 = 0$ to 2d.p's

$$= \underline{\underline{2.35}} \text{ or } \underline{\underline{-0.85}}$$

8. Solve $x_{n+1} = 2 + \frac{1}{x_n}$ starting with an initial value of $x_0 = 4$, giving your answer to 1d.p

$$2.25000$$

$$2.41509$$

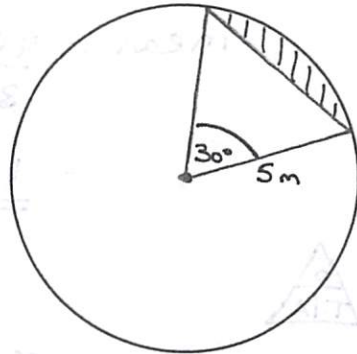
$$2.44444$$

$$2.41406$$

$$2.40909$$

$$\underline{\underline{x = 2.4}}$$

9. Find the area of the segment, to 3 sig. figs.



AREA OF SECTOR

$$A = \frac{30}{360} \times \pi \times 5^2$$

$$= 6.54$$

AREA OF TRIANGLE

$$A = \frac{1}{2} \times 5 \times 5 \times \sin 30$$

$$= 6.25$$

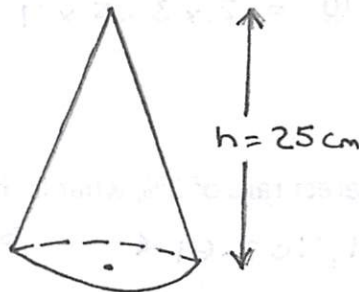
AREA OF SEGMENT

$$6.54 - 6.25$$

$$= \underline{\underline{0.295 \text{ m}^2}}$$

10. Find the volume of the cone, to 4 sig. figs

$$V = \frac{1}{3} \pi r^2 h$$



$$r = 7 \text{ cm}$$

$$V = \frac{1}{3} \pi \times 7^2 \times 25$$

$$= \underline{\underline{1283 \text{ cm}^3}}$$