

**ANGLICAN HIGH SCHOOL
SECONDARY ONE MATHEMATICS
WEIGHTED ASSESSMENT 3**

Name: _____ ()

Class: _____

Date:

Duration: 1 hour

Assessment noted by:	S1
_____ Name of Parent/Guardian	
_____ Signature of Parent/Guardian	Max: 40
Date: _____	

READ THESE INSTRUCTIONS FIRST

Write your Class, Index Number and Name on all the work you hand in.

Write in dark blue or black pen.

You may use an HB pencil for any diagrams or graphs.

Do not use staples, paper clips, glue or correction fluid.



Answer **all** the questions.

If working is needed for any question it must be shown with the answer.

Omission of essential working will result in loss of marks.

The use of an approved scientific calculator is expected, where appropriate.

If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to three significant figures. Give answers in degrees to one decimal place.

For π , use either your calculator value or 3.142, unless the question requires the answer in terms of π .

The number of marks is given in brackets [] at the end of each question or part question.

For Examiners' Use

Question Number	1	2	3	4	5	6	7	8	9
Marks									

Penalty

Clarity/ Logic		Accuracy/ Precision		Units	
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This document consists of 8 printed pages.

2

- 1 (a) Express the following ratio in the simplest form.

1.6 km : 6400 cm

Answer [2]

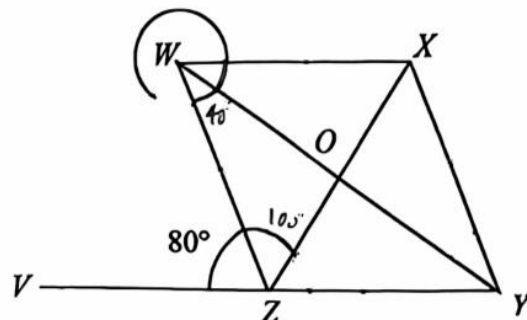
- (b) Convert 54 m/s to km/h.

Answer km/h [1]

- 2 180 balls were initially sorted and put into boxes A , B and C in the ratio $3 : 5 : n$.
If the balls are rearranged such that there are equal number of balls in each box, box A would have an additional of 30 balls as compared to the initial. Find the value of n .

Answer $n =$ [3]

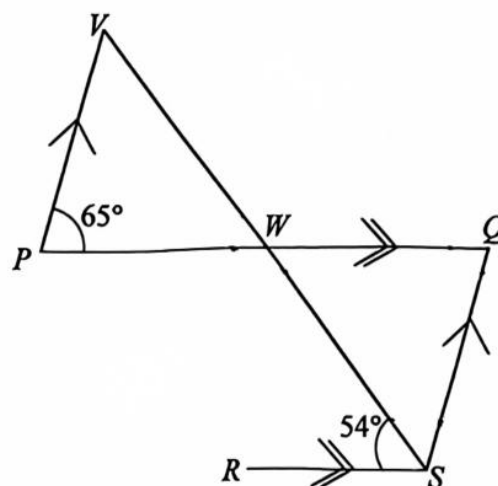
- 3 (a) $WXYZ$ is a rhombus and VZY is a straight line. The diagonals of the rhombus, WY and XZ meet at a point O . Given that angle $VZW = 80^\circ$, find reflex angle XWZ , stating your reasons clearly.



Answer $^\circ$ [2]

- (b) In the diagram, PQ is parallel to RS and PV is parallel to SQ . Given angle $VPW = 65^\circ$ and angle $RSW = 54^\circ$, by stating your reasons clearly, calculate

- (i) angle PWV ,



Answer $^\circ$ [1]

- (ii) angle VSQ .

Answer $^\circ$ [3]

Turn Over

- 4 A bus took $3\frac{3}{4}$ hours to travel from a village in Malaysia to Singapore at an average speed of v km/h.

(a) Find the distance between the village in Malaysia and Singapore, in terms of v .

Answer km [1]

(b) If it increases its speed by 8 km/h, the bus will reach Singapore 30 minutes earlier. Find another expression, in terms of v , for the distance between the village in Malaysia and Singapore.

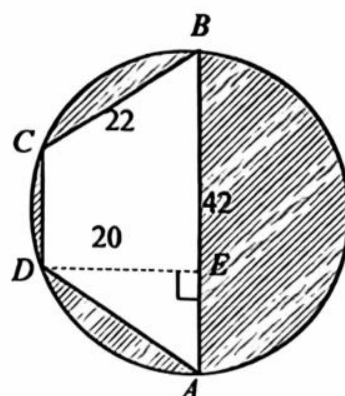
Answer km [1]

(c) Hence, by forming an equation, find the value of v .

Answer $v =$ [3]

5

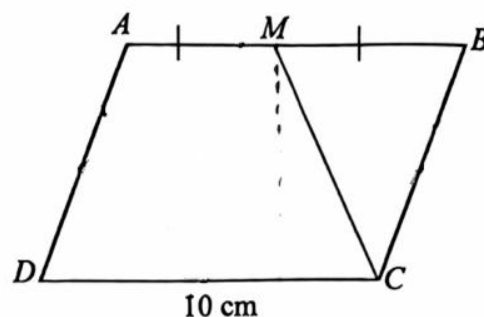
- 5 (a) In the figure below, the diameter of the circle, AB , is 42 cm.
 DC is parallel to AB and $AB : DC = 3 : 1$.
 $DE = 20$ cm and is perpendicular to AB .
 Given also that $AD = BC = 22$ cm, find the area of the shaded region.



Answercm² [3]

- (b) In the figure, $ABCD$ is a parallelogram, $CD = 10$ cm and M is the midpoint of AB . Given that the area of $ABCD$ is 60 cm², find

- (i) the height of the parallelogram,



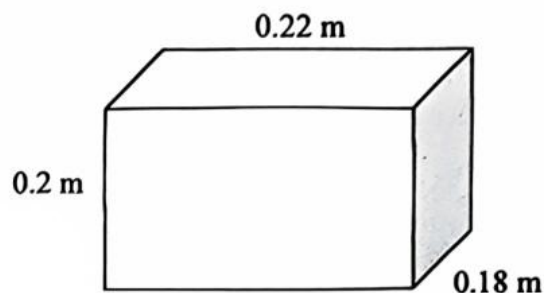
Answercm [2]

- (ii) find the area of triangle CMB .

Answercm² [1]

Turn Over

- 6 (a) Below shows a rectangular block of metal of dimensions 0.22 m by 0.18 m by 0.2 m. Find the volume of metal in cm^3 .



Answer cm^3 [2]

- (b) The block is melted and recast into identical solid cylinders. Each cylinder has a radius of 4 cm and height of 10 cm. Find the number of full solid cylinders that can be formed.

Answer [3]

- 7 In a regular n -sided polygon, the ratio of the interior angle to the exterior angle is $13:2$. Find the number of sides of the polygon.

Answer [3]

- 8 Sarah was planning to buy some products online from either Korea or Japan. She did some research on the exchange rates. The exchange rates between Singapore dollars (SGD), Korean Won (KRW) and Japanese Yen (JPY) were $1 \text{ SGD} = 114.72 \text{ JPY}$ and $1 \text{ KRW} = 0.11 \text{ JPY}$.

- (a) Find the exchange rate between Singapore (SGD) and Korean Won (KRW).

Answer $1 \text{ SGD} = \dots \text{ KRW}$ [2]

- (b) A pack of masks was sold for 9899 KRW on Korean website and 1284.86 JPY on a Japanese website. If the order qualifies for free shipping, which one offered a better deal? Show your working clearly.

- 9 Pat can make 15 cups of bubble tea in 30 minutes and Sally can make 12 cups of bubble tea in 36 minutes. How much time will Pat and Sally take to make 100 cups of bubble tea if they work concurrently?
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Answer [4]

END OF PAPER