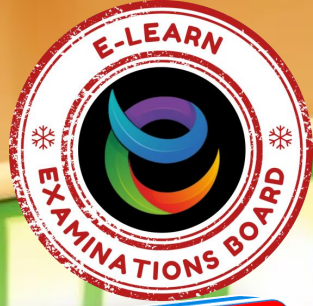
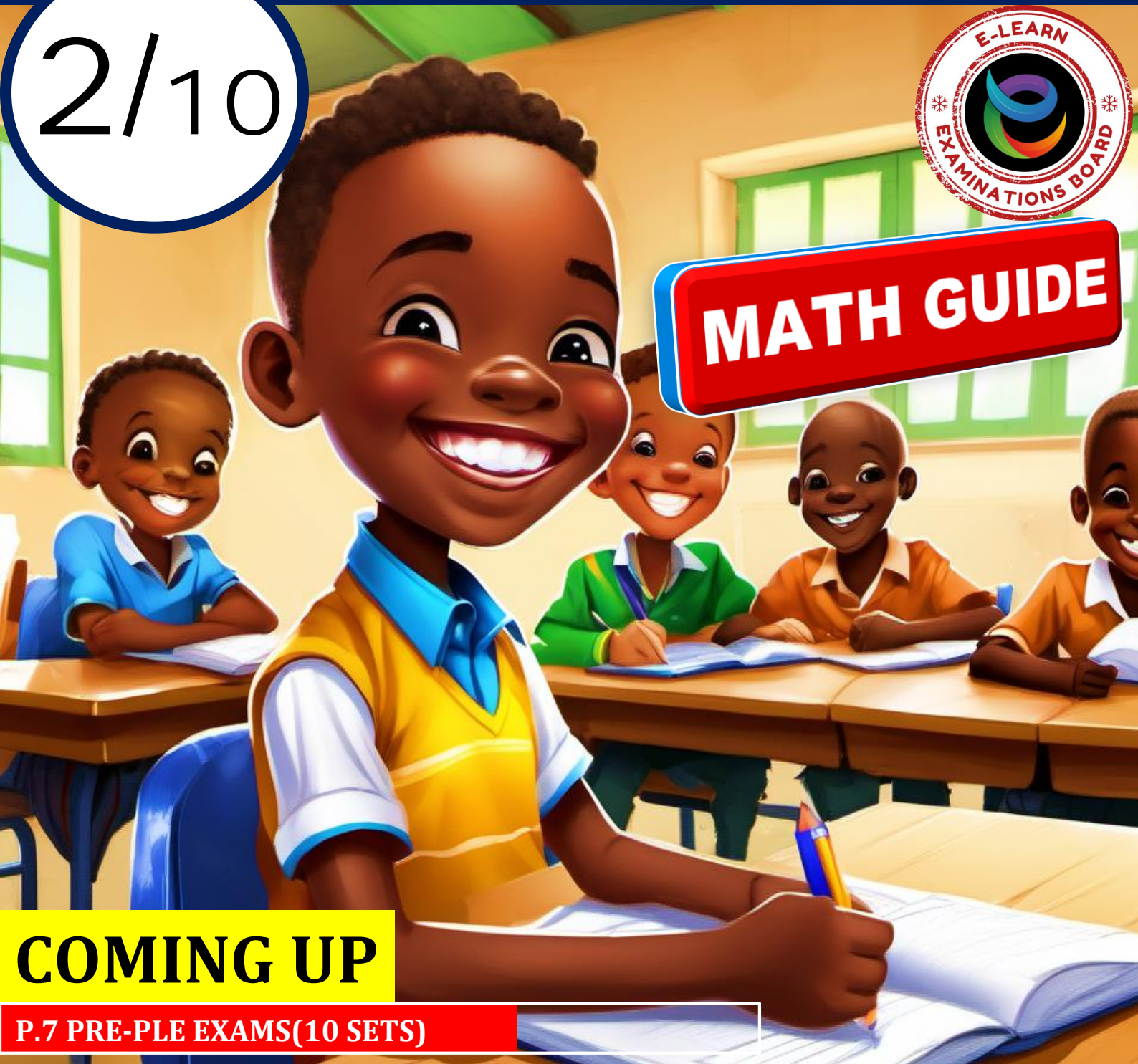


PRE PLE 2024

2/10



MATH GUIDE



COMING UP

P.7 PRE-PLE EXAMS(10 SETS)

NAME:

SCHOOL:



0780-438054



0708-43805

SECTION A: 40 MARKS

Answer **all** the questions in this section.

Questions **1** to **20** carry **two** marks each.

1. Work out: $4 + 0.2$

$$\begin{array}{r} 4.0 \\ + 0.2 \\ \hline 4.2 \\ \text{B}_2 \text{ on sight} \end{array}$$

2. Write 290 in words.

Two hundred ninety nine

B₂ on sight

3. Write 94 in Roman numerals.

$$94 = 90 + 4$$

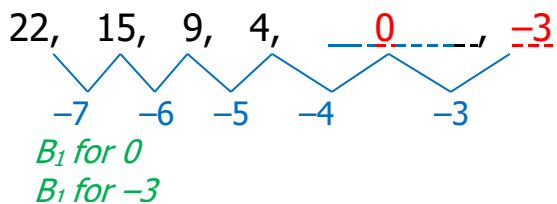
90	4
XC	IV

M₁ for changing 90 to XC and 4 to IV

A₁ for 94 = XCIV

$$94 = \text{XCIV}$$

4. Find the next two numbers in the sequence:



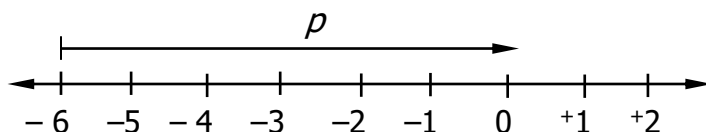
5. Simplify: $5a - 3 + 2a + 7$

$$\begin{array}{l} 5a - 3 + 2a + 7 \\ 5a + 2a + 7 - 3 \\ \hline 7a + 4 \end{array}$$

M₁ for collecting like terms

A₁ for 7a + 4

6. Write the integer represented by arrow p .



$$P = +6 \quad B_2 \text{ on sight}$$

7. Convert 4.5 tonnes to kilogrammes.

$$1 \text{ tonne} = 1,000 \text{ kg}$$

$$4.5 \text{ tonnes} = 4.5 \times 1,000 \text{ kg}$$

$$\underline{4.5 \text{ tonnes} = 4,500 \text{ kg}}$$

M₁ for correct working

A₁ for 4,500 kg

8. List all the factors of 24.

$$1 \times 24 = 24$$

B₂ on sight

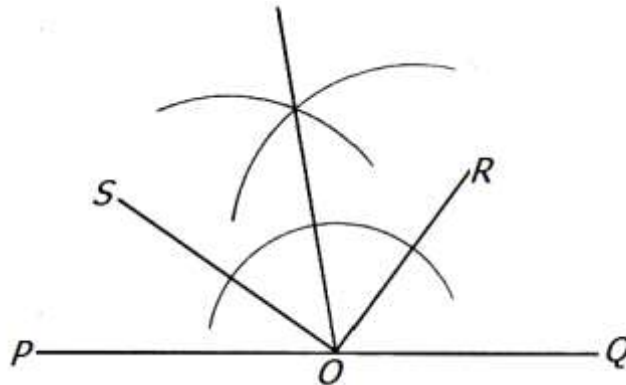
$$2 \times 12 = 12$$

$$3 \times 8 = 24$$

$$4 \times 6 = 24$$

$$F_{24} = \{1, 3, 4, 6, 8, 12 \text{ and } 24\}$$

9. Using a ruler and a pair of compasses only, bisect angle *SOR*.



10. Use $<$, $>$ or $=$ complete the expression below.

$$2\frac{1}{3}\% = \frac{7}{300}$$

$$\left(\frac{7}{300} \times 100\right)\%$$

$$2\frac{1}{3}\%$$

$$2\frac{1}{3}\%$$

$$\frac{7}{3} \div \frac{100}{1}$$

$$\frac{7}{3} \times \frac{1}{100} = \frac{7}{300}$$

M₁ for correct working

A₁ for completing the statement with =

11. A train departed from station A at 10:00 a.m. and arrived at Station B at 3:40 a.m. the following day. For how long did the train travel?

h m	h m
24 : 00	14 : 00
- 10 : 00	+ 3 : 40
14 : 00	17 : 40

12. The table below shows the marks scored in a test by P.7 pupils.

Marks	70	85	90	50
Number of pupils	3	1	2	4

Find the mean mark.

$$\text{Mean} = \frac{\text{Sum of marks}}{\text{Total number of pupils}}$$

$$\text{Mean} = \frac{(70 \times 3) + (85 \times 1) + (90 \times 2) + (50 \times 4)}{3 + 1 + 2 + 4}$$

$$\text{Mean} = \frac{210 + 85 + 180 + 200}{10}$$

$$\text{Mean} = \frac{675}{10}$$

$$\text{Mean} = 67.5 \text{ or } 67\frac{1}{2} \text{ marks}$$

M₁ for correct substitution

A₁ for 67.5 or 67 $\frac{1}{2}$ marks

13. Express $1\frac{1}{3}$ hour as seconds.

$$1 \text{ hour} = 3,600 \text{ seconds}$$

$$1\frac{1}{3} \text{ hour} = \frac{4}{3} \times 3,600 \text{ seconds}$$

M₁ for correct working

A₁ for 4,800 seconds

$$1\frac{1}{3} \text{ hour} = 4 \times 1,200 \text{ seconds}$$

$$1\frac{1}{3} \text{ hour} = 4,800 \text{ seconds}$$

14. Simplify: $\frac{3}{4} \div \frac{1}{3}$

$$\frac{3}{4} \div \frac{1}{3}$$

$$\frac{3}{4} \times \frac{3}{1} = \frac{9}{4} = 2\frac{1}{4}$$

$$\text{LCM} = 12$$

$$\left(\frac{3}{4} \times 12\right) \div \left(\frac{1}{3} \times 12\right)$$

$$(3 \div 3) \div (1 \times 4)$$

$$\frac{9}{4} = 2\frac{1}{4}$$

M₁ for working

A₁ for 2 $\frac{1}{4}$

Reject $\frac{9}{4}$

15. Express 400 centimetres as a ratio of 2 metres.

$$1 \text{ meter} = 100 \text{ cm}$$

$$2 \text{ metres} = (2 \times 100) \text{ cm}$$

$$2 \text{ metres} = 200 \text{ cm}$$

$$\frac{400 \text{ cm}}{200 \text{ cm}} = \frac{2}{1}$$

$$2:1$$

M₁ for 2 metres = 200 cm

A₁ for 2:1

16. Evaluate: $4 \div \sqrt{16}$

$$\sqrt{16} = \sqrt{2^2 \times 2^2}$$

$$= 2 \times 2$$

$$= 4$$

$$4 \div 4 = 1$$

M₁ for $\sqrt{16} = 4$

A₁ for 1



17. Given that USD 1 = Ugsh 3,750. How much Ugandan shillings can a tourist get from USD 400?

$$\text{USD } 1 = \text{Ugsh } 3,750$$

$$\text{USD } 400 = \text{Ugsh } 3,750 \times 400$$

$$\underline{\text{USD } 400 = \text{Ugsh } 1,500,000}$$

M₁ for correct working

A₁ Ugsh1,500,000

18. Solve: $4 - g = 2$

$$\begin{aligned} 4 - g &= 2 \\ 4 - 4 - g &= 2 = 2 - 4 && \text{M}_1 \text{ for transposing} \\ -g &= -2 && \text{A}_1 g = 2 \\ -\underline{g} &= -\underline{2} \\ - & && \\ g &= 2 \end{aligned}$$

19. Expand 75.8 using powers of ten.

T	O		Tth
7	5	.	8

$$(7 \times 10) + (5 \times 1) + (8 \times \frac{1}{10})$$

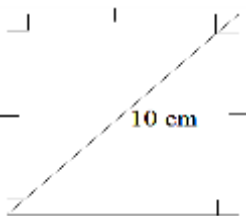
$$(7 \times 10^1) + (5 \times 10^0) + (8 \times 10^{-1})$$

M₁ for working

A₁ for correct answer

*Encourage learners to indicate brackets

20. Calculate the area of the given square.



Method 1

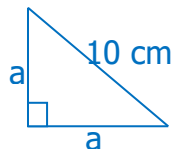
$$\text{Area} = \frac{1}{2} \times (\text{diagonal})^2$$

$$\text{Area} = \frac{1}{2} \times (10 \text{ cm})^2$$

$$\text{Area} = \frac{1}{2} \times 10 \text{ cm} \times 10 \text{ cm}$$

$$\text{Area} = 50 \text{ cm}^2$$

Method 2



$$a^2 + a^2 = c^2$$

$$a^2 + a^2 = 10^2$$

$$2a^2 = 10 \times 10$$

$$\frac{2a^2}{2} = \frac{100}{2}$$

$$a^2 = \frac{50}{2}$$

$$\sqrt{a^2} = \sqrt{50}$$

$$a = \sqrt{50}$$

$$\text{Area} = \text{side} \times \text{side}$$

$$= \sqrt{50} \times \sqrt{50}$$

$$= \sqrt{50 \times 50}$$

$$= \sqrt{2500}$$

$$= 50$$

$$\text{Area} = 50 \text{ cm}^2$$

M₁ for $a = \sqrt{50}$

A₁ for 50 cm^2

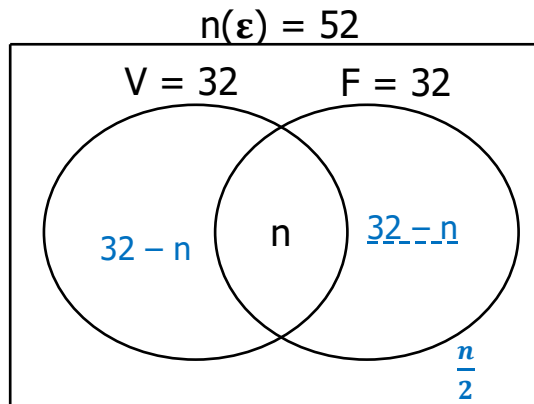
SECTION B: 60 MARKS

Answer **all** the questions in this section.

Marks for each question are indicated in brackets.

21. In a class of 52 pupils, the number of pupils who play football (F) is equal to those who play volleyball (V). Also, n pupils play both football and netball. The number of those who do not play any of the two games is a half of those who play both games.

- (a) Use the given information to complete the Venn diagram below. (03 marks)



B₁ for every correct entry

- (b) Find the value of n . (02 marks)

$$32 - n + n + 32 - n + \frac{n}{2} = 52$$

$$32 - n + n + 32 - n + \frac{n}{2} = 52$$

$$32 + 32 - n + \frac{n}{2} = 52$$

$$2(64 - n) + \frac{n}{2} \times 2 = 52 \times 2$$

$$128 - 128 - n = 104 - 128$$

$$\begin{aligned}
 -n &= -24 \\
 -(-n) &= -(-24) \\
 n &= 24
 \end{aligned}$$

M₁ for equation

A₁ for $n = 24$

22. Given that $y = 2x - 1$. Complete the table below. (05 marks)

x	2	3	0	4	2
y	3	5	-1	7	-5

B₁ for every correct entry

$$\begin{aligned}
 y &= 2x - 1 \\
 y &= (2 \times 2) - 1 \\
 y &= 4 - 1 \\
 y &= 3
 \end{aligned}$$

$$\begin{aligned}
 y &= 2x - 1 \\
 5 &= 2x - 1 \\
 5 + 1 &= 2x \\
 6 &= 2x \\
 6 \div 2 &= 2x \div 2 \\
 3 &= x \\
 x &= 3
 \end{aligned}$$

$$\begin{aligned}
 y &= 2x - 1 \\
 y &= (2 \times 0) - 1 \\
 y &= 0 - 1 \\
 y &= -1
 \end{aligned}$$

$$\begin{aligned}
 y &= 2x - 1 \\
 7 &= 2x - 1 \\
 7 + 1 &= 2x \\
 8 &= 2x \\
 8 \div 2 &= 2x \div 2 \\
 4 &= x \\
 x &= 4
 \end{aligned}$$

$$\begin{aligned}
 y &= 2x - 1 \\
 y &= (2 \times -2) \\
 y &= 4 - 1 \\
 y &= 3
 \end{aligned}$$

23. (a) A motorist took $3\frac{1}{2}$ hours to travel a distance of 336 km. He took 2 hours to travel the remaining 148 km, what was her average speed for the whole journey? (03 marks)

$$\begin{aligned} \text{Average speed} &= \frac{\text{Total distance}}{\text{Total time}} \\ \text{Total Distance: } &336 \text{ km} \\ &+148 \text{ km} \\ &\underline{484 \text{ km}} \\ \text{Total time: } &3\frac{1}{2} \text{ h} + 2 \text{ h} = 5\frac{1}{2} \text{ h} \\ \text{Average speed} &= 484 \text{ km} \div 5\frac{1}{2} \text{ h} \\ &= 484 \text{ km} \div \frac{11}{2} \text{ h} \end{aligned} \quad \left| \begin{aligned} &= \frac{484 \text{ km}}{1 \text{ h}} \times \frac{2}{11} \text{ h} \\ &= \frac{44}{1 \text{ h}} \times \frac{2}{11} \text{ h} \quad B_1 \text{ for total distance (484 km)} \\ &\quad B_1 \text{ for total time (5\frac{1}{2} h)} \\ &= \frac{88 \text{ km}}{1 \text{ h}} \quad A_1 \text{ for 88 km/h} \\ &= 88 \text{ km/h} \end{aligned} \right.$$

- (b) Write twenty minutes to seven o'clock in the evening in 24-hour clock system. (02 marks)

$$\begin{aligned} \text{Time in 12-hour clock: } &6:40 \text{ p.m.} \\ \text{Time in 24-hour clock: } &12 : 00 \\ &+06 : 40 \\ &\underline{18 : 40 \text{ hours}} \end{aligned} \quad \left| \begin{aligned} &B \text{ for } 6:40 \text{ p.m.} \\ &A \text{ for } 18:40 \text{ hours} \\ &\text{Reject;} \\ &\bullet 1840 \\ &\bullet 1840 \text{ hours} \\ &\bullet \text{Encourage learners to put} \\ &\quad \text{colons to separate hours from} \\ &\quad \text{minutes} \end{aligned} \right.$$

24. (a) Change 133_{six} to base two. (03 marks)

1	3	3
$\times 6^2$	$\times 6^1$	$\times 6^0$

$$\begin{aligned} &(1 \times 6^2) + (3 \times 6^1) + (3 \times 6^0) \\ &(1 \times 6^2) + (3 \times 6^1) + (3 \times 6^0) \\ &(1 \times 6 \times 6) + (3 \times 6) + (3 \times 1) \\ &36 + 18 + 3 \\ &57 \end{aligned} \quad \left| \begin{aligned} &57 \div 2 = 28 \text{ rem } 1 \\ &28 \div 2 = 14 \text{ rem } 0 \\ &14 \div 2 = 7 \text{ rem } 0 \\ &7 \div 2 = 3 \text{ rem } 1 \\ &3 \div 2 = 1 \text{ rem } 1 \\ &1 \div 2 = 0 \text{ rem } 1 \\ &\text{Therefore, } 133_{\text{six}} = 111001_{\text{two}} \\ &M_1 \text{ for } 57 \\ &M_1 \text{ for correct division} \\ &A_1 \text{ for } 133_{\text{six}} = 111001_{\text{two}} \end{aligned} \right.$$

- (b) If 23rd April 2024 was a Tuesday, what day of the week was 23rd July 2024? (03 marks)

$$\begin{aligned} \text{Tot. Number of days} & \\ \text{April: } &(30 - 23) = 7 \\ \text{May: } &31 \\ \text{June: } &30 \\ \text{July: } &23 \\ &7 + 31 + 30 + 23 = 91 \text{ days} \\ \text{Tue} + 91 &= \text{___ (finite 7)} \\ 2 + 91 &= \text{___ (finite 7)} \\ 93 &= \text{___ (finite 7)} \\ 93 \div 7 &= 13 \text{ rem } 2 \end{aligned} \quad \left| \begin{aligned} &93 = 2(\text{finite } 7) \\ &2(\text{finite } 7) \text{ is Tuesday} \\ &\text{Therefore, the day was} \\ &\text{Tuesday} \\ &B_1 \text{ for } 91 \text{ days} \\ &B_1 \text{ for } 93 \div 7 = 13 \text{ rem } 2 \\ &A_1 \text{ for Tuesday} \end{aligned} \right.$$

25. In a village SACCO each share costs sh 120,000. Otim bought 3 shares and invested them for 2 years at an interest rate of 2.5 % per month. How much money did he have in the SACCO after 2 years? (04 marks)

Principal

$$\begin{array}{r} \text{Sh } 120,000 \\ \times \quad 3 \\ \hline \text{Sh } 360,000 \end{array}$$

$$SI = P R T$$

$$SI = \text{Sh } 360,000 \times 2.5\% \times (2 \times 12)$$

$$SI = \text{Sh } 360,000 \times 2.5\% \times (2 \times 12)$$

$$SI = \text{Sh } 360,000 \times \left(\frac{25}{100} \div \frac{100}{1}\right) \times 24$$

$$SI = \text{Sh } 360,000 \times \left(\frac{25}{100} \times \frac{1}{100}\right) \times 24$$

$$SI = \text{Sh } 360 \times 25 \times 24$$

$$SI = \text{Sh } 216,000$$

$$\text{Amount} = P + SI$$

$$\text{Sh } 360,000$$

$$+ \text{Sh } 216,000$$

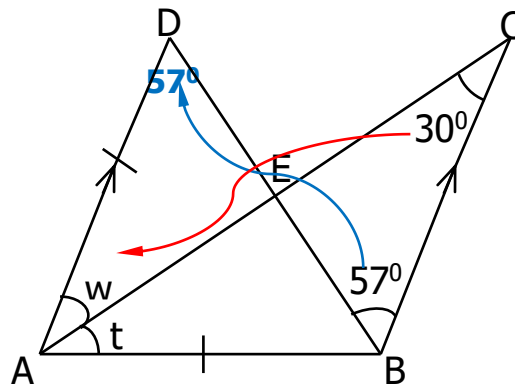
$$\hline \text{Sh } 576,000$$

M₁ for sh 360,000

M₁ for finding simple interest

M₁ for sh 576,000

26. In the diagram below, line AD is parallel to line BC and line AD = line AB. Angle DBC = 57° and angle BCE = 30°. Study the diagram and use it to answer the questions that follow.



Find the size of;

57°

- (i) angle t.

$$t + 57^\circ + 57^\circ + 30^\circ = 180^\circ$$

$$t + 144^\circ = 180^\circ$$

$$t + 144^\circ - 144^\circ = 180^\circ - 144^\circ$$

$$t = 36^\circ$$

M₁ for correct working

A₁ for t = 36°

There are very many approaches to this question.

A learner **MUST** have filled the required information in the diagram to qualify for the marks.

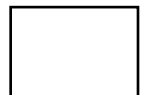
- (ii) angle w.

$$w = \angle BCE$$

$$w = 30^\circ$$

M₁ for correct working

A₁ for t = 30°



27. Two taps A and B are connected on a tank. Tap A alone fills the tank in 40 minutes while tap B alone empties the tank in 60 minutes.

- (a) If both taps are turned on at the same time, how many hours will the tank take to get full? (03 marks)

<p><i>Tap A</i> 40 min \Rightarrow 1 tank 1 min $\Rightarrow \frac{1}{40}$ of the tank</p> <p><i>Tap B</i> 60 min \Rightarrow 1 tank 1 min $\Rightarrow \frac{1}{60}$ of the tank</p>	<p><i>Both taps (A + B)</i></p> $\frac{1}{40} - \frac{1}{60} = \frac{3-2}{120}$ $= \frac{1}{120}$	<p><i>Time taken</i></p> $1 \div \frac{1}{120} \quad M_1 \text{ for } \frac{1}{120}$ $1 \times \frac{120}{1} \quad M_1 \text{ for } 120$ <p>120 minutes <i>minutes</i></p> <p>$\frac{120}{60}$ hours <i>A₁ for 2 hours</i></p> <p>2 hours</p>
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- (b) Tap B withdraws 40 liters of water in one hour. Calculate the capacity of the tank. (02 marks)

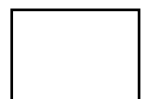
<p>Let the capacity be g.</p> $\frac{1}{60} \times g = 40 \text{ litres}$ $\frac{g}{60} \times 60 = 60 \times 40 \text{ litres}$ <p>g = 240 litres</p>	<p><i>M₁ for correct equation</i></p> <p><i>A₁ for 2,400 litres</i></p>
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28. (a) A trader bought a goat at sh 100,000 and sold it at sh 80,000. Work out the trader's percentage loss. (02 marks)

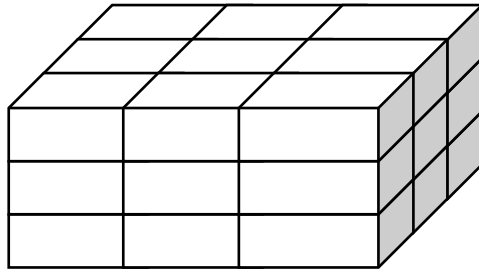
<p>Percentage loss = $\left(\frac{\text{Loss}}{\text{Buying price}}\right) \times 100\%$</p> <p>Loss = BP – SP</p> <table border="0"> <tr><td>Sh 100,000</td></tr> <tr><td>– Sh 80,000</td></tr> <tr><td><u>Sh 20,000</u></td></tr> </table>	Sh 100,000	– Sh 80,000	<u>Sh 20,000</u>	<p>Percentage loss = $\left(\frac{\text{sh } 20,000}{\text{sh } 100,000}\right) \times 100\%$</p> <p>= 20%</p> <p><i>M₁ for sh 20,000</i></p> <p><i>A₁ for 20%</i></p>
Sh 100,000				
– Sh 80,000				
<u>Sh 20,000</u>				

- (b) Which number become 216 after it has been increased by 20% and reduced by 25%? (03 marks)

<p>Let the number be n.</p> $(100\% + 20\%) \times (100\% - 25\%) \times n = 216$ $120\% \times 75\% \times n = 216$ $\frac{120}{100} \times \frac{75}{100} \times n = 216$ $\frac{900n}{1000} \times 100 = 216 \times 1000$ $\frac{900n}{100} \times 100 = 216 \times 1000$ <p>900 n = 216,000</p>	$\frac{900n}{900} = \frac{216,000}{900}$ <p>n = 2400</p> <p><i>M₁ for equation</i></p> <p><i>M₁ for 900 n = 216,000</i></p> <p><i>A₁ for n = 2400</i></p> <p>Accept other correct approaches</p>
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29. The diagram below shows equal cuboids piled to form a stack. Each cuboid measures 30 cm length, 25 cm width and 15 cm height. Study the diagram and use it to answer the questions that follow.



- (a) How many cuboids are piled in the first layer? (01 mark)

$$3 \times 3 = 9 \text{ cuboids}$$

B₂ on sight

- (b) Calculate the height of the stack. (02 marks)

$$15 \times 3 \text{ cm} = 45 \text{ cm} \quad \text{or} \quad 15 \text{ cm} + 15 \text{ cm} + 15 \text{ cm} = 45 \text{ cm}$$

M₁ for repeated addition or multiplication

A₁ for 45 cm

- (c) Work out the area on the ground that is covered by the cuboids. (02 marks)

$$\text{Area} = L \times W$$

$$L = 30 \text{ cm} \times 3 = 90 \text{ cm}$$

$$W = 25 \text{ cm} \times 3 = 75 \text{ cm}$$

$$\text{Area} = 90 \text{ cm} \times 75 \text{ cm}$$

$$\text{Area} = 6,750 \text{ cm}$$

M₁ correct working

A₁ for 6,750 cm

30. Solve for p : $2^{2p} \div \frac{1}{8} = \frac{1}{128}$ (03 marks)

$$2^{2p} \div \frac{1}{8} = \frac{1}{128}$$

$$\begin{array}{r|l} 2 & 8 \\ 2 & 4 \\ 2 & 2 \\ \hline & 1 \\ \hline \frac{1}{8} & = \frac{1}{2^3} \end{array}$$

$$\begin{array}{r|l} 2 & 128 \\ 2 & 64 \\ 2 & 32 \\ 2 & 16 \\ 2 & 8 \\ 2 & 4 \\ 2 & 2 \\ \hline & 1 \end{array}$$

$$\frac{1}{128} = \frac{1}{2^7}$$

$$2^{2p} \div \frac{1}{8} = \frac{1}{128}$$

$$2^{2p} \div 2^{-3} = 2^{-7}$$

$$2^{2p-3} = 2^{-7}$$

$$2p - (-3) = -7$$

$$2p + 3 = -7$$

$$2p + 3 - 3 = -7 - 3$$

$$2p = -10$$

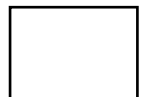
$$\frac{2p}{2} = \frac{-10}{2}$$

$$p = -5$$

M₁ for $2^{2p} \div \frac{1}{8} = \frac{1}{128}$

M₁ for $2p + 3 = -7$

A₁ for $p = -5$



31. The diagram below shows a rectangular sheet of metal. The sheet will be curved to make a cylinder. Study the diagram and use it to answer the questions that follow. (Take $\pi = \frac{22}{7}$)



- (a) Work out the base area of the cylinder. (04 marks)

$$\begin{aligned}
 \text{Base area} &= \pi r^2 \\
 \text{But } 220 \text{ cm} &= \text{circumference} \\
 220 \text{ cm} &= 2\pi r \\
 220 \text{ cm} &= 2 \times \frac{22}{7} \times r \\
 7 \times 220 \text{ cm} &= \frac{44r}{7} \times 7 \\
 \frac{7 \times 220 \text{ cm}}{44} &= \frac{44r}{44} \\
 7 \times 5 \text{ cm} &= r \\
 \text{radius} &= 35 \text{ cm} \\
 \text{Base area} &= \frac{22}{7} \times 35 \text{ cm} \times 35 \text{ cm} \\
 &= 22 \times 5 \text{ cm} \times 35 \text{ cm} \\
 &= 3,850 \text{ cm}^2 \\
 M_1 \text{ for finding radius} \\
 B_1 \text{ for radius (35 cm)} \\
 M_1 \text{ for finding base area} \\
 A_1 \text{ for base area } 3,850 \text{ cm}^2
 \end{aligned}$$

$$\begin{aligned}
 \text{Base area} &= \pi r^2 \\
 \text{But } 220 \text{ cm} &= \text{circumference} \\
 220 \text{ cm} &= \pi d \\
 220 \text{ cm} &= \frac{22}{7} \times d \\
 7 \times 220 \text{ cm} &= \frac{22d}{7} \times 7 \\
 \frac{7 \times 220 \text{ cm}}{22} &= \frac{22d}{22} \\
 7 \times 10 \text{ cm} &= d \\
 \text{Diameter} &= 70 \text{ cm} \\
 \text{Radius} &= 70 \text{ cm} \div 2 \\
 &= 35 \text{ cm} \\
 \text{Base area} &= \frac{22}{7} \times 35 \text{ cm} \times 35 \text{ cm} \\
 &= 22 \times 5 \text{ cm} \times 35 \text{ cm} \\
 &= 3,850 \text{ cm}^2
 \end{aligned}$$

- (b) Work out the capacity of the cylinder. (03 marks)

$$\begin{aligned}
 \text{Capacity} &= \frac{\text{Vol in cm}^3}{1000 \text{ cm}^3} \\
 \text{Vol} &= \text{base area} \times \text{height} \\
 &= 3,850 \text{ cm}^2 \times 130 \text{ cm} \\
 &= 500,500 \text{ cm}^3
 \end{aligned}$$

$$\text{Capacity} = \left(\frac{500,500 \text{ cm}^3}{1,000 \text{ cm}^3} \right) \text{ liters}$$

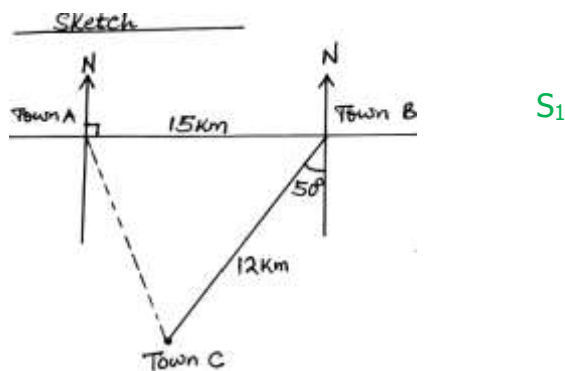
$$\begin{aligned}
 &= \frac{5005}{10} \text{ liters} \\
 &= 500.5 \text{ liters/ } 500\frac{1}{2} \text{ litres}
 \end{aligned}$$

$$\begin{aligned}
 M_1 \text{ for volume} &= 500,500 \text{ cm}^3 \\
 M_1 \text{ for finding capacity} \\
 A_1 \text{ for } 500.5 / 500\frac{1}{2} \text{ litres}
 \end{aligned}$$

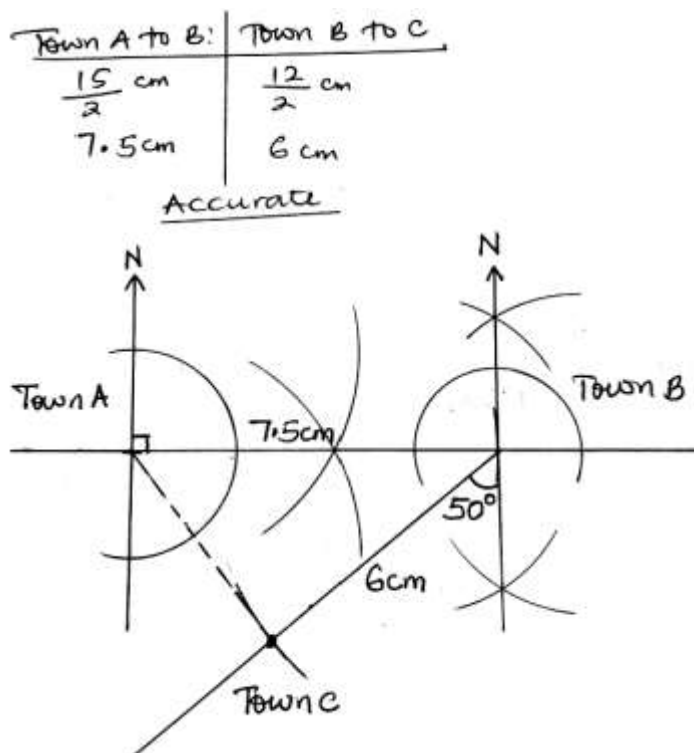
$$\begin{aligned}
 M_1 \text{ for volume} &= 500,500 \text{ cm}^3 \\
 M_1 \text{ for calculating capacity} \\
 A_1 \text{ for } 500.5 \text{ liters / } 500\frac{1}{2} \text{ litres}
 \end{aligned}$$

32. Town B is 15 km away from Town A on a bearing of 090° . The direction of town C from town B is $S50^{\circ}W$ and the distance between them is 12 km.

- (a) Draw a sketch diagram to show the location of the three towns. (01 mark)



- (b) Using a scale of 1 cm to represent 2 km, draw the accurate diagram. (04 marks)



- (c) Find the shortest distance in km between town A and town C. (01 mark)

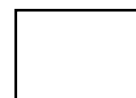
$$(4.8 \times 2) \text{ km}$$

$$\frac{48}{10} \times 2 \text{ km}$$

$$\frac{96}{10} \text{ km}$$

$$9.6 \text{ km}$$

B₁ for 9.6 km



END