

LUNERO DISTRICT ACADEMIC BOARD

PRIMARY SEVEN TRIAL TEST 2024
MATHEMATICS GUIDE

NO	EXPECTED RESPONSE	AWARD	COMMENT
----	-------------------	-------	---------

SECTION A

1

$$\begin{array}{r} 36 \\ + 12 \\ \hline 48 \end{array}$$

✓

B2

On sight

2

$$x' = \{p, q, r, s, t, u\}$$

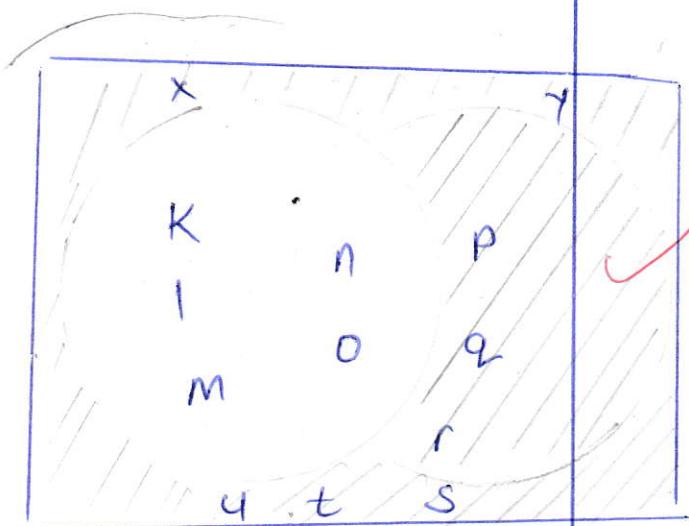
✓

B1

$$n(x') = 6$$

✓

B1

For identifying
 x' for the number
of elements.

B1

For identifying x'

$$n(x') = 6$$

✓

B1

for the number.

Approved:
John Shadrack

3. $\frac{3}{4} \div \frac{1}{2}$

$$= \frac{3}{4} \times \frac{2}{1} \quad \checkmark$$

M Follow through

$$= \frac{3}{2}$$

$$= 1\frac{1}{2} \quad \checkmark$$

A1 For accuracy

Or

$$\frac{3}{4} \div \frac{1}{2}$$

$$= \left(\frac{3}{4} \times 4 \right) \div \left(\frac{1}{2} \times 2 \right) \quad \checkmark$$

M1 For working correctly

$$= 3 \div 2$$

$$= 1\frac{1}{2} \quad \checkmark$$

A1 For accuracy

4.

$33, 37, 43, 51, 60, 70, \underline{82}, \underline{96}$	B1	collect pattern
$+4 +6 +8 +9 +10 +12 +14$	B1	collect sequence

Approved - 
 Andie Douglas

	Boys	Girls	Total
15+8	15	38	
↓ 23			

B1 For total

$38 \rightarrow \begin{array}{cccc} / / / & / / / & / / / & / / / \\ / / / & / / / & / / / & / / \end{array}$

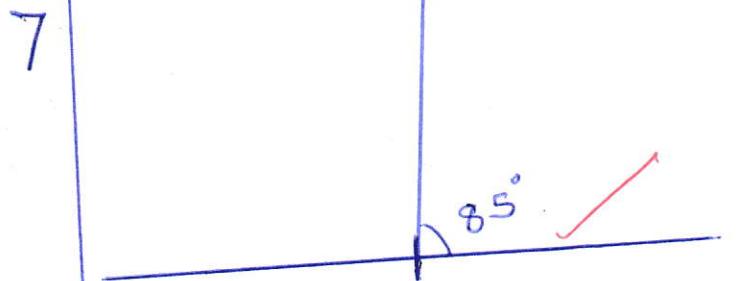
B1

For tallies

$$6 \quad 3 \times 3 \quad \checkmark$$

B2

For correct statement



B2

On sight

$$8 \quad \cancel{3.4 \times 10^4}$$

$$3.4 \times 10^4$$

$$\frac{34}{10} \times 10 \times 10 \times 10 \times 10$$

M Follow through

$$= 34000 \quad \checkmark$$

A1 For accuracy

or

$$34000 \quad \checkmark$$

M1

$$= 34000 \quad \checkmark$$

A1

Approved:

$$9 \\ 3:30 \text{ pm} \\ +12 \text{ } 00 \\ \hline 15 \text{ } 30 \text{ hours} \quad \checkmark$$

B₁ for changing 12 hour clock to 24 hour

$$15 \text{ } 30 \text{ hours} \\ -6 \text{ } 00 \text{ hours} \\ \hline 09 \text{ } 30 \text{ hours} \quad \checkmark$$

B₁ for correct working.

or
Local language approach

$$9 \text{ } 30 \\ 6 \text{ } 00 \\ \hline 3 \text{ } 30 \quad \checkmark$$

B₁

$$09 \text{ } 30 \text{ hours} \quad \checkmark$$

B₁

Time after noon

3h 30 min

Remain time

$$\cancel{6:60} \\ -3:30 \\ \hline 2:30 \quad \checkmark$$

B₁

Starting time

$$\cancel{12:00} \\ -2:30 \\ \hline 9:30 \quad \checkmark$$

Approved.
Abdullah
Head Teacher

Starting time

$$9:30 \text{ am}$$

$$08 \text{ } 00$$

$$09 \text{ } 30 \text{ hours} \quad \checkmark$$

B₁

$$10 \quad \frac{1}{2} b_1 h_1 = \frac{1}{2} b_2 h_2$$

$$\cancel{\frac{1}{2}} \times 2\text{cm} \times \text{py} = \cancel{\frac{1}{2}} \times 10\text{cm} \times 6\text{cm}$$

my for correct working

$$\frac{6\text{cm} \times \text{py}}{6\text{cm}} = \frac{30^5 \text{cm}^2}{6\text{cm}}$$

$$\text{py} = 5\text{cm} \checkmark$$

A1 for accuracy

$$11 \quad 12\% \Rightarrow \text{sh. } 6720$$

$$1\% \Rightarrow \frac{\text{sh. } 6720}{12}$$

$$100\% \Rightarrow \text{sh. } 560 \times 100 \\ \Rightarrow \text{sh. } 56000 \checkmark$$

B1

Cash paid

$$\text{sh. } 56000$$

$$\begin{array}{r} -\text{sh. } 6720 \\ \hline \text{sh. } 49280 \end{array}$$

✓ B1

Or

$$\frac{12}{100} \text{ of CP} = \text{sh. } 6720$$

$$\frac{12 \text{ CP}}{100} = \text{sh. } 6720 \times 100$$

$$! \quad \frac{12 \text{ CP}}{100} = \frac{\text{sh. } 672000}{100}$$

$$! \quad \frac{12 \text{ CP}}{100} = \text{sh. } 56000 \checkmark$$

Approved.
Muhammad

B1

~~cash paid~~

$$\begin{array}{r}
 \text{Sh. } 56000 \\
 - \text{Sh. } 6720 \\
 \hline
 \text{Sh. } 49280
 \end{array}$$

B1

For accuracy

Method 3

$$100\% - 12\% = 88\%$$

$$12\% \Rightarrow \text{Sh. } 6720$$

$$1\% \Rightarrow \frac{\text{Sh. } 6720}{12}$$

$$88\% \Rightarrow \frac{\cancel{\text{Sh. } 6720}}{\cancel{12}} \times 88 \quad \checkmark$$

$$\text{Sh. } 560 \times 88$$

$$\text{Sh. } 49280$$

B1

Method 4

$$\text{Sh. } 6720 \div \frac{12}{100} \quad \checkmark$$

$$\text{Sh. } \cancel{6720} \times \frac{100}{\cancel{12}} \quad \checkmark$$

B1

for division

$$\text{Sh. } 560 \times 100$$

$$\text{Sh. } 56000$$

$$\text{Sh. } 56000$$

$$- \text{Sh. } 6720$$

$$\hline \text{Sh. } 49280$$

Approved.
M. A. Abdulla

12 Workout : $122_{\text{four}} - 33_{\text{four}}$

$$\begin{array}{r} \cancel{0} \quad \cancel{4} \\ \cancel{1} \times 2 \\ - 33_{\text{four}} \\ \hline \cancel{2} \quad \cancel{3}_{\text{four}} \end{array} \quad \begin{array}{l} 4+2=6 \\ 6-3=3 \\ 4+1=5 \\ 5-3=2 \end{array}$$

my for correct working

A₁ for accuracy

13 1645

$$5+5=10$$

$$164-10=154 \quad \checkmark$$

B₁ for 154

$$\cancel{154} - (\cancel{4}+\cancel{4}) = 15 - (4+4)$$

$$15-8$$

$$= 7$$

Since 7 is a multiple of 7
so, 1645 is exactly divisible by 7

for conclusion

14 $10(\text{finite } 15) = 10, 25, 40, \cancel{55}, 70, \dots$

$7(\text{finite } 12) = 7, 19, 13, 43, \cancel{55}, \dots$

for listing

P = 55 books \checkmark

B₁

for identifying common member.

15 $302, 202$

Thousands	Units
302	202

Approved:
Hanif Hardiu

$302, 202 \Rightarrow \text{Three hundred two thousand two hundred two.}$ B₂

16	$A(0,3) \checkmark$	reject $A=(0,3)$	B2	for correct coordinates
17	$8 = 5y - 7$		M1	for collecting like terms
	$8+7 = 5y - 7+7 \checkmark$			
	$15 = 5y \checkmark$			
	$\frac{15^3}{5} = \underline{\underline{5}} \checkmark$			
	$y = 3 \checkmark$		A1	for accuracy
18	$1\text{km} = 1000\text{m}$			
	68 $648\text{km} = 648000\text{m}$			
	$1\text{hr} = 3600\text{ seconds}$			
	$4\text{hrs} = (3600 \times 4)\text{seconds}$			
	Speed $= \frac{D}{T} \checkmark$			
	$= \frac{648000\text{ m}}{(4 \times 3600)\text{s}} \checkmark$		M1	for converting
	$= 45\text{m/s} \checkmark$		A1	correct division
	or			
	$S = \frac{D}{T}$			
	$= \frac{162}{1\text{hr}} \text{ km}$			
	$= 162\text{ km/hr} \checkmark$			
			B1	for finding speed

Approved:
Hansard

$$D = 162 \text{ km}$$

$$1 \text{ km} = 1000 \text{ m}$$

$$162 \text{ km} = (162 \times 1000) \text{ m}$$

$$1 \text{ h} = 3600 \text{ seconds}$$

$$= \left(\frac{162000}{3600} \right) \text{ m/s} \checkmark$$

$$= 45 \text{ m/s}$$

B₁ For correct division

19

$$\text{Soda} : \text{Beer}$$

$$5 : 3$$

$$24$$

$$3 \text{ parts rept. } 24$$

$$1 \text{ part rept. } \frac{24}{3}$$

$$1 \text{ part rept. } 8$$

$$5 \text{ parts} \Rightarrow 8 \times 5 \\ = 40 \text{ bottles}$$

B₁

More bottles of soda

$$\begin{array}{r} 40 \\ -24 \\ \hline 16 \end{array}$$

more bottles of
soda.

B₁

Approved
H. M. Shadman

Method 2

$$5 - 3 = 2$$

3 parts \Rightarrow 24

$$\begin{array}{r} \text{1 part} \Rightarrow \frac{24}{3} \\ \Rightarrow 8 \end{array}$$

2 parts $\Rightarrow 8 \times 2$

\Rightarrow 16 more bottles of soda.

B1

B1

Method 3

$$5 + 3 = 8$$

$$\begin{array}{r} \text{3 parts} \Rightarrow \frac{24}{3} \\ \Rightarrow 8 \end{array}$$

8 parts $\Rightarrow (8 \times 8)$ bottles

\Rightarrow 64 bottles

B1

$$\begin{array}{r} 64 \\ - 24 \\ \hline 40 \end{array}$$

$$\begin{array}{r} 40 \\ - 24 \\ \hline 16 \end{array}$$

more bottles of soda.

Approved:
John Badine

B1

Method 4

fraction for sodas $\Rightarrow \frac{3}{8}$

$$24 \div \frac{3}{8}$$

$$24 \times \frac{8}{3}$$

$$8 \times 8$$

64 bottles ✓

B1

No. of bottles of soda

$$\begin{array}{r} 64 \\ -24 \\ \hline 40 \end{array}$$

More bottles of soda

$$\begin{array}{r} 40 \\ -24 \\ \hline 16 \end{array}$$

more bottles ✓

B1

$$20 \quad 3K = 70 + 80^\circ C$$

$$\begin{array}{r} 3K \\ \hline 3 \end{array} = \begin{array}{r} 150^\circ \\ \hline 3 \end{array}$$

$$K = 50^\circ C \checkmark$$

B1

Approved:

H. S. Dhadia

For value of K

$\angle BCD$

$$= 3K$$

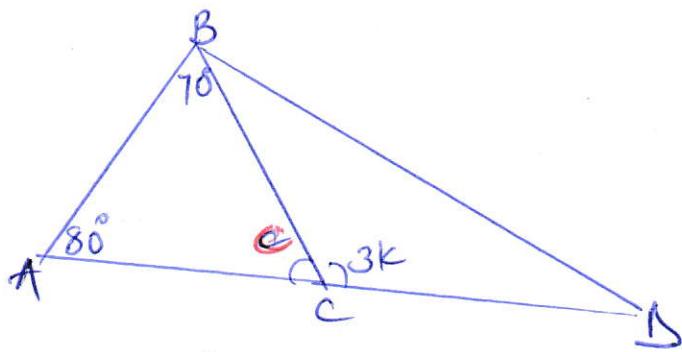
$$= 3 \times 50^\circ$$

$$= 150^\circ \cancel{C}$$

B1

For $\angle BCD$

Method 2



$$C + 80^\circ + 70^\circ = 180^\circ$$

$$C + 150^\circ = 180^\circ$$

$$C + 150^\circ - 150^\circ = 180^\circ - 150^\circ$$

$$C = 30^\circ$$

$$3K + 30^\circ = 180^\circ$$

$$3K + 30^\circ - 30^\circ = 180^\circ - 30^\circ$$
$$3K = 150^\circ$$

$$\frac{3K}{3} = \frac{150^\circ}{3}$$
$$1K = 50^\circ$$

B1

For value of K

$$\angle BCD = 3K$$

$$= 3 \times 50^\circ$$

$$= 150^\circ$$

B1

For $\angle BCD$

Approved.
Signature

SECTION B

AWARD COMMENT

Q1(a) In 1 minute tap Q fills $\frac{1}{9}$ of the tank.

In 1 minute tap K fills $\frac{1}{12}$ of the tank

In 1 min tap Q and K fills

$$\frac{1}{9} + \frac{1}{12}$$

$$\text{lcm } = 36$$

$$\frac{4+3}{36}$$

$$= \frac{7}{36}$$



B1

For a fraction
 $(\frac{7}{36})$

$$2 \left(\frac{7}{36} \times 1 + \frac{400}{400} \right)$$

M1

For correct working

$$2(7 \times 400)$$

$$2(2800)$$

5600 litres

In 2 minutes tap Q and K add 5600 litres.

A1

For 5600 litres

b

$$\frac{7}{36} - \frac{1}{6}$$



B1

Approved.
And Shadia

$$= \frac{7-6}{36}$$

$$= \frac{1}{36}$$

B1

Duration

$$1 = \frac{1}{36}$$

$$1 \times 36$$

$$= 36 \text{ minutes}$$

Or

In 1 min tap Q fills
 $\left(\frac{1}{7} \times \frac{1600}{14400}\right)$ litres

$$= 1600 \text{ litres } \checkmark$$

B1

In 1 min tap K fills

$$\left(\frac{1}{7} \times \frac{1200}{14400}\right)$$

$$= 1200 \text{ litres } \checkmark$$

B1

In 1 minute tap Q
and K fill

$$\begin{array}{r} 1600 \text{ litres} \\ 1200 \text{ litres} \\ \hline 2800 \text{ litres} \end{array}$$

In 2 minutes

$$2 \times 2800 \text{ litres}$$

$$5600 \text{ litres } \checkmark$$

B1

Alternative c

$$\frac{1}{36} \checkmark \text{ B1}$$

1 minute

$$\left(\frac{1}{36} \times \frac{400}{14400}\right) l$$

$$= 2800 \text{ litres } \checkmark$$

In 2 minutes \checkmark

$$2800 \text{ litre}$$

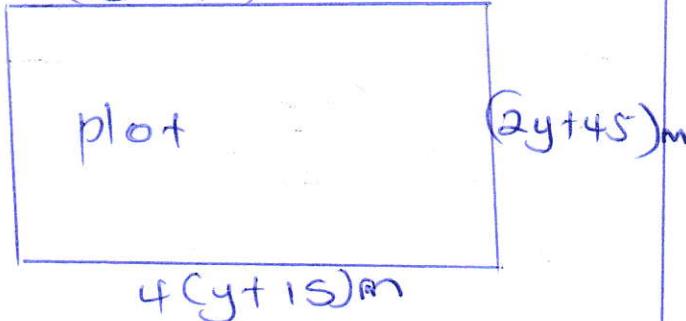
$$\times 2$$

$$\hline 5600 \text{ litres } \checkmark$$

B1

Approved
Abdullah

$$(3y+90) \text{ m}$$



$$(3y+90) = 4(y+15) \quad M_1$$

$$3y+90 = 4y+60$$

$$3y - 4y + 90 = 4y - 4y + 60$$

$$-y + 90 - 90 = 60 - 90$$

$$\frac{-y}{-1} = \frac{-30}{-1}$$

$$y = 30 \quad A_1$$

$$P =$$

$$\text{length } 3y+90$$

$$(3 \times 30 \text{ m}) + 90 \text{ m}$$

$$90 \text{ m} + 90 \text{ m}$$

$$180 \text{ m}$$

$$\text{Width} = (2y+45) \text{ m}$$

$$= (2 \times 30 \text{ m}) + 45 \text{ m}$$

$$= 60 \text{ m} + 45 \text{ m}$$

$$= 105 \text{ m}$$

$$P = 2(L+w)$$

$$= 2(180 \text{ m} + 105 \text{ m})$$

$$= 2(285 \text{ m})$$

$$= 570 \text{ m} \quad B_1$$

for forming equation

for Accuracy

*Approved.
Hukma
Kadim*

For perimeter

No. of poles

$$= \frac{570 \text{ m}}{6 \text{ m}}$$

$$= 95 \text{ poles } \checkmark$$

B1 For number of poles

b

$$\text{Sh. } 12000 \times 95 \checkmark$$

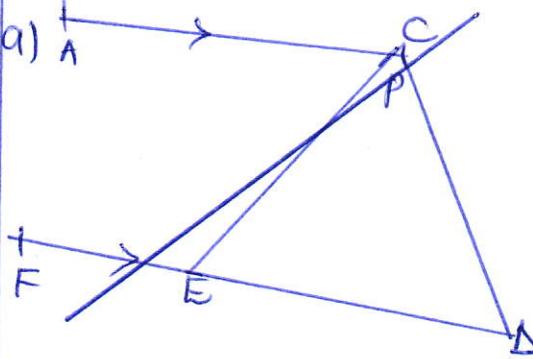
$$= \text{Sh. } 1,140,000 \checkmark$$

my

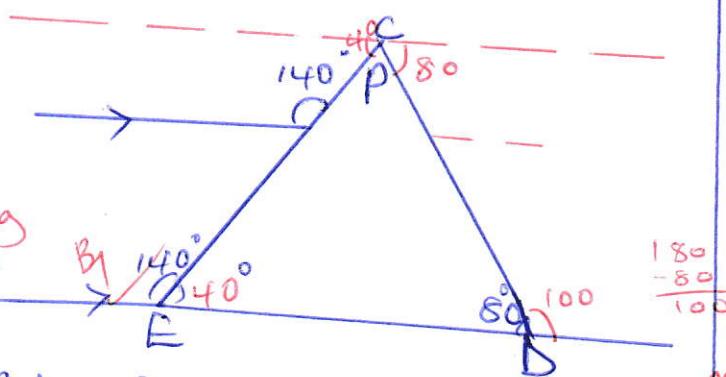
A1

For amount of the poles.

23a)



Approved.
Hindustan
Burdwan



Alternative c

$$40^\circ + p + 80^\circ = 180^\circ \text{ (straight line)} \quad M$$

$$120^\circ + p = 180^\circ$$

$$120^\circ - 120^\circ + p = 180^\circ - 120^\circ \\ p = 60^\circ$$

$$P + 80^\circ = 140^\circ \text{ (sum of opposite angles for ext. angle)} \\ P + 80^\circ - 80^\circ = 140^\circ - 80^\circ \checkmark \\ P = 60^\circ \checkmark$$

M formed

Alternative D

$$p + 40^\circ = 100^\circ \\ p + 40^\circ - 40^\circ = 100^\circ - 40^\circ \\ p = 60^\circ$$

$$\text{Or } p + 40^\circ + 80^\circ = 180^\circ \text{ (int. sum of angles)} \\ p + 120^\circ = 180^\circ \\ p + 120^\circ - 120^\circ = 180^\circ - 120^\circ \\ p = 60^\circ$$

b) Supplement of $(y+40^\circ)$

$$180^\circ - (y + 40^\circ) \quad \text{M}_1$$

$$180^\circ - y^\circ - 40^\circ$$

$$180^\circ - 40^\circ - y^\circ$$

$$140^\circ - y^\circ$$

$$(140 - y)^\circ \quad \text{C}$$

A₁

Or

Let the supplementary angle be K

$$K + (y + 40)^\circ = 180^\circ$$

$$K + (y + 40)^\circ - (y + 40)^\circ = \quad \text{M}_1$$

$$180^\circ - (y + 40)^\circ$$

$$K = 180^\circ - y^\circ - 40^\circ$$

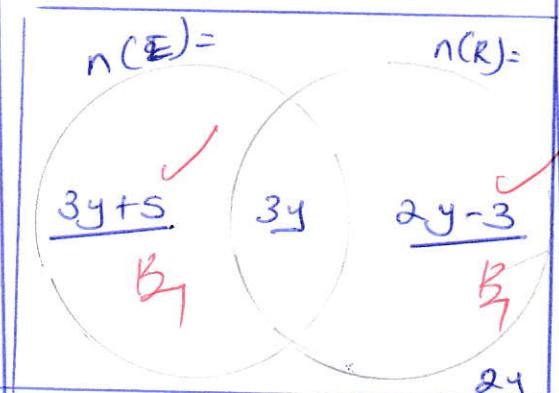
$$K = 180^\circ - 40^\circ - y^\circ$$

$$K = 140^\circ - y^\circ \quad \text{A}_1$$

The supplementary angle is $(140 - y)^\circ$

Approved.
~~Handwriting~~

24



for correct entry
of $3y + 5$ and
 $2y - 3$

b

$$\begin{aligned}
 3y + 5 &= 2y - 3 + 18 \quad \checkmark \text{ my} \\
 3y + 5 &= 2y + 15 \\
 3y - 2y + 5 &= 2y - 2y + 15 \\
 y + 5 &= 15 - 5 \\
 y &= 10 \quad \checkmark
 \end{aligned}$$

A

No of guests who visited both

$$\begin{aligned}
 3y &= 3 \times 10 \\
 &= 30 \text{ guests} \quad \checkmark
 \end{aligned}$$

Or

$$\begin{aligned}
 (3y + 5) - (2y - 3) &= 18 \\
 3y + 5 - 2y + 3 &= 18 \\
 3y - 2y + 5 + 3 &= 18 \\
 y + 8 &= 18 \\
 y + 8 - 8 &= 18 - 8 \\
 y &= 10
 \end{aligned}$$

both

$$3y$$

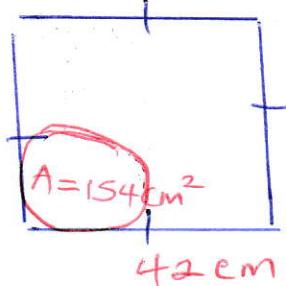
$$3 \times 10$$

30 guests.

Approved

 H. S. Budhiraja

25



$$A = \pi r^2$$

$$\pi \times 154 \text{ cm}^2 = \frac{22}{7} \times r^2 \quad \checkmark$$

$$\frac{\pi \times 154 \text{ cm}^2}{\cancel{22}} = \frac{22}{\cancel{22}} r^2$$

$$\sqrt{49 \text{ cm}^2} = \sqrt{r^2} \quad \checkmark$$

$$7 \text{ cm} = r \quad \checkmark \quad \text{BT}$$

$$r = 7 \text{ cm} \quad \checkmark \quad A$$

$$D = 2r$$

$$D = 2 \times 7 \text{ cm} \quad \text{BT}$$

$$D = 14 \text{ cm} \quad \checkmark$$

No of ~~sq~~^{circular} designs,

Along each side

$$\frac{42}{14} = 3 \text{ designs} \quad \text{B1}$$

$$\text{Total} = 3 \times 3$$

$$= 9 \text{ circular designs} \quad \text{B1}$$

$$\text{Or } \frac{42}{14} \times \frac{42}{14} = 9 \text{ circular designs}$$

for proper substitution

for radius

for diameter

Approved.
~~Abhishek~~ Abhishek

for designs

Total circular designs

Or

$$\pi r^2 = A$$

$$\frac{22}{7} r^2 = 154 \text{ cm}^2$$

$$\frac{r}{22} \times \frac{22}{7} r^2 = 154 \text{ cm}^2 \times \frac{7}{22}$$

$$r^2 = 7 \text{ cm}^2 \times 7$$

$$\sqrt{r^2} = \sqrt{49 \text{ cm}^2}$$

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

$$D = 2r$$

$$D = 2 \times 7 \text{ cm}$$

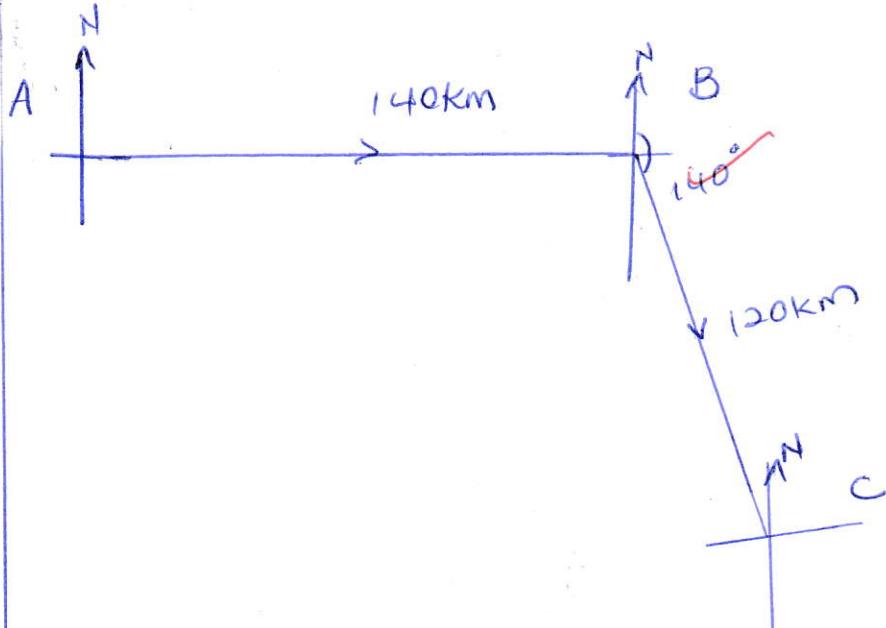
$$D = 14 \text{ cm}$$

No of circular designs along each side

$$\frac{42}{14} = 3 \text{ circular designs}$$

$$\begin{aligned} \text{Total} &= 3 \times 3 \\ &= 9 \text{ circular designs} \end{aligned}$$

Approved
Henderson



S₁ For the correct sketch

$$\begin{aligned} \text{Speed} &= \frac{\text{Distance}}{\text{Time}} = \frac{140 \text{ km}}{1.12 \text{ hr}} \\ &= 120 \text{ km/h} \end{aligned}$$

from A to B

20km rept. 1cm

$$\begin{aligned} 140 \text{ km} &\text{ rept. } 140 \text{ km rept. } \left(\frac{140}{20}\right) \text{ cm} \\ &= 7 \text{ cm} \end{aligned}$$

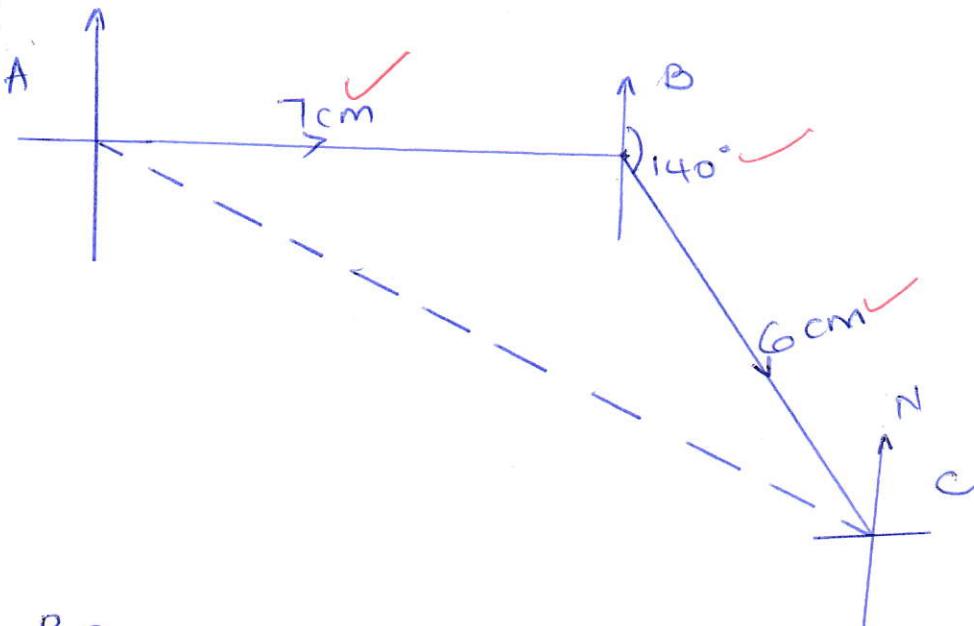
from B to C

20km rept. 1cm

$$\begin{aligned} 120 \text{ km} &\text{ rept. } \left(\frac{120}{20}\right) \text{ cm} \\ &= 6 \text{ cm} \end{aligned}$$

Accurate diagram

Approved
John Doe
Hand Drawing



L_1 for 7cm(AB)

B_1 for angle 140°

L_4 for 6cm(Bc)

Bc

b Shortest distance

$$11.8 \text{ cm} \pm 0.1$$

1cm repts 20km

$$\begin{aligned} 11.8 \text{ cm rept. } & (11.8 \times 20) \text{ km} \\ & = 236 \text{ km} \end{aligned}$$

=

$$27(a) 4^{2y} \times 4 = 256$$

$$4^{2y} \times 4^1 = 4^4$$

$$4^{(2y+1)} = 4^4$$

$$2y+1 = 4$$

$$2y+1-1 = 4-1$$

$$2y = 3$$

$$\frac{2y}{2} = \frac{3}{2}$$

$$\frac{y}{y} = \frac{\frac{3}{2}}{2}$$

4	256
4	64
4	16
4	4
	1

B_1

B_1 for factorisation

m_1

Approved.
Muhammad

A_1 for accuracy

$$b) p^3 \times p^4 \div p^5$$

$$p^{(3+4)} \div p^5 \checkmark$$

$$p^{7-5}$$

$$p^2 \checkmark$$

M₁

A₁

or

$$p^3 \times p^4 \div p^5$$

$$\frac{p \times p \times p \times p \times p \times p}{p \times p \times p \times p \times p \times p} \checkmark$$

M₁

$$p \times p$$

$$p^2 \checkmark$$

A₁

28 Let the youngest age be x.

$$\text{Middle child} = 3x \quad B_1$$

$$\text{Oldest child} = 4\frac{1}{2}x \checkmark$$

$$= \frac{9}{2}x \checkmark$$

$$\text{Total} = 34$$

$$x + 3x + \frac{9}{2}x = 34 \quad B_1$$

$$2 \times 4x + \frac{9}{2}x \times 2 = 34 \times 2$$

$$8x + 9x = 68 \checkmark$$

$$17x$$

$$= 68 \quad M_1 \text{ final collection of like terms}$$

$$\frac{17x}{17}$$

$$= 4 \checkmark$$

$$\frac{x}{x}$$

for question interpretation

Approved
~~Additional~~

formation of equation -
Alternative B

$$4x + 3x + \frac{9}{2}x = 34 \quad M_1$$

$$\frac{4x + 9x}{2} = 34$$

$$\frac{8x + 9x}{2} = 34 \checkmark$$

$$2x \frac{17x}{2} = 34 \times 2$$

$$17x$$

$$\frac{17x}{17}$$

$$= 68 \quad M_1$$

$$= \frac{68}{17} \checkmark$$

$$= 4 \quad A_1$$

$$\text{youngest} = x \\ = 4 \text{ years}$$

A1 Accuracy

$$\text{Oldest child} = \frac{9}{2} x \\ = \frac{9}{2} x + 4 \\ = 18 \text{ years}$$

$$\text{Range} = H - L \\ = (18 - 4) \text{ years} \\ = 14 \text{ years}$$

B1 for range

29(a) Round off 6787 to the nearest thousand

	H	T	O
6	7	8	7
RPV			

$$\begin{array}{r} 6000 \\ + 1000 \\ \hline 7000 \end{array}$$

$$\therefore 6787 \approx 7000$$

Or

$$\begin{array}{r} \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\ 6 \quad 7 \quad 8 \quad 7 \\ + 1000 \\ \hline 7000 \end{array}$$

Reject

$$\begin{array}{r} \text{Th} \quad \text{H} \quad \text{T} \quad \text{O} \\ 6 \quad 7 \quad 8 \quad 7 \\ \downarrow \\ 7000 \end{array}$$

Approved.
~~Handwriting~~

b) 449 in Roman numerals

$$400 + 40 + 9 \\ \downarrow \quad \downarrow \quad \downarrow \\ CD \quad XL \quad IX$$

$$449 = CDXLIV$$

B2 For Roman numeral
(on sight)

$$C \quad (2 \times 10^3) + (3 \times 10^2) + (2 \times 10^1) + (1 \times 10^0)$$

$$(2 \times 10 \times 10 \times 10) + (3 \times 10 \times 10) + (2 \times 10) + (1 \times 1)$$

$$2000 + 300 + 20 + 1$$

~~B₁~~
B₁

For expanding

$$\begin{array}{r} 2000 \\ 300 \\ + 20 \\ \hline 2320 \end{array}$$

~~B₁~~

for accuracy

$$30a \quad \text{Arrival} = -25$$

$$\text{Train} = 45$$

$$45 - (-25)$$

$$45 + 25$$

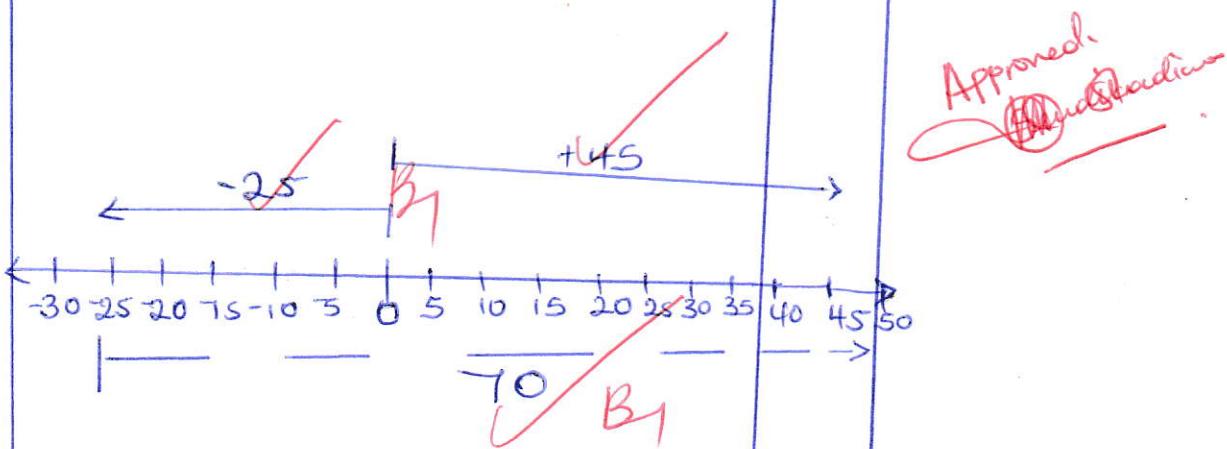
70 minutes

= 1 h 10 minutes

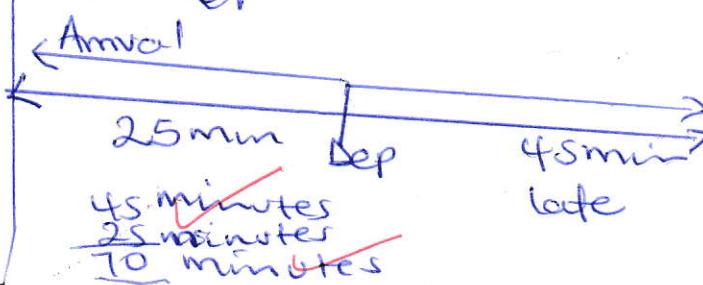
M

A₁

or



or



M
A₁

31

$$\frac{2x}{3} + 2 \leq 4$$

$$\frac{2x}{3} + 2 - 2 \leq 4 - 2 \quad \checkmark$$

M₁ collecting like terms

$$\frac{2x}{3} \leq 2$$

$$3 \times \frac{2x}{3} \leq 2 \times 3$$

$$\frac{2x}{2} \leq \frac{6}{2}$$

$$x \leq 3 \quad \checkmark$$

A₁ for value of x

$$X = \{3, 2, 1, 0, -1, \dots\}$$

B₁ for solution set.

or

$$\frac{2x}{3} + 2 \leq 4 \quad \checkmark$$

~~A₁~~

$$3 \times \frac{2x}{3} + 2 \times 3 \leq 4 \times 3$$

M₁

$$2x + 6 \leq 12 \quad \checkmark$$

Approved.
End of page

$$2x + 6 - 6 \leq 12 - 6$$

$$\frac{2x}{2} \leq \frac{6}{2} \quad \checkmark$$

$$x \leq 3 \quad \checkmark$$

A₁ for value of x

$$X = \{3, 2, 1, 0, -1, -2, \dots\}$$

B₁ for solution set.

or

$$\frac{2x+2}{3} \leq 4$$

$$\frac{2x+2}{3} \leq 4$$

$$\frac{2x+6}{3} \leq 4$$

$$\frac{(2x+6)}{3} \leq 4 \times 3$$

$$\cancel{6x+12} \leq 12$$

$$2x+6 \leq 12$$

$$2x+6-6 \leq 12-6$$

$$\frac{2x}{2} \leq \frac{6}{2}$$

$$x \leq 3$$

$$x = \{3, 2, 1, 0, -1, -2, \dots\}$$

3b) Meat

$$\frac{3}{2} \times \text{sh. } 14000$$

$$3 \times \text{sh. } 7000$$

$$\text{sh. } 21000$$

✓ B₁

Approved
Handmade

Charcoal

$$\frac{1}{2} \times \text{sh. } 2500$$

$$\text{sh. } 22500$$

✓ B₁

Milk

$$\frac{350\phi}{1000} \times \text{sh} 12\phi\phi$$

$$350 \times 12$$

$$\text{sh. } 4200 \quad \checkmark$$

B1

Total expenditure minus
the discount

$$\text{sh. } 21000$$

$$\text{sh. } 22500$$

$$+\text{sh. } 4200$$

$$\underline{\text{sh. } 47700} \quad \checkmark$$

~~B1~~

b

His change total
expenditure

$$\text{sh. } 47700$$

$$-\text{sh. } 1300$$

$$\underline{\text{sh. } 46400}$$

B1

b

$$\text{sh. } 70,000$$

$$-\text{sh. } 46,400$$

$$\underline{\text{sh. } 23,600}$$

B1

Or

$$\text{sh. } 70,000$$

$$-\text{sh. } 47700$$

$$\underline{\text{sh. } 22300}$$

Approved

James N. Stadler

$$\text{sh. } 22300$$

$$+\text{sh. } 1300$$

$$\underline{\text{sh. } 23600}$$

B1

No. 32(a)



Time in hours.

Approved
Anand Mehta

32.b. He reached at 3:00 pm. ✓

B1