MARKING SCHEME (FORM TWO) 2024

1 $\sqrt[3]{\frac{0.064 \times 0.125 \times 100000}{0.008 \times 0.001 \times 1000000}}$ M1

$= \sqrt[3]{\frac{64 \times 125}{8 \times 1}}$ M1

$= \sqrt[3]{100}$

$= 10$ A1

2. $= (5.624 \times 10^{1}) - 1$ $= (6.443)^3$

$= 0.1778 \times 10^{-1}$ $= 267.5$ M1

$= 0.01778$ M1 $= 267.5 + 0.01778$

$= 267.51778$

$= 267.5$ A1

3 (a) $= 6000 \times 134.46$ M1

$=$ Ksh 806.760 A1

(b) $\frac{500000 \times 100}{102.65}$ ✓M1

$= 779347$ Japanese yen A1.

4 $2x + 3y = 1$ --- (i) B1

$3x - 2y = 8$ --- (ii)

$4x + 6 = 2$ --- (i) $\times 2$ M1

$9x - 6y = 24$ --- (ii) $\times 3$

$13x = 26$

$x = \frac{26}{13}$

$= 2$ A1

from equation (i)

$2 \times 2 + 3y = 1$

$3y = 1 - 4$

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

$= -1$ A1

6 $= -8 \times 4 + 144 \div 4$ of -6

$= -32 + 144 \div -24$

$= -38$ M1

$= -5 - -18 + 6$

$= -5 + 18 + 6$

$= 19$ M1

$= \frac{-38}{19}$

$= -2$ A1

7 $180,000 - 100,000 = 80,000$ M1

$\text{Comm} = \frac{2}{100} \times 80,000$

$= 1600 /=$ M1

$T.E = \text{Comm} + \text{Bls}$

$= 1600 + 12,000$

$=$ Ksh 136.00 A1

8 $R = 2.8383\ldots$ B1

$100R = 283.8383\ldots$

$R = 2.8383$ M1

$99R$

$R = \frac{281}{99}$ A1

9

2	12	18	60
2	6	9	30
3	3	9	15
3	1	3	5
5		1	5

B1

L.C.M = 180 M1

$= \frac{180}{60}$ M1

= 3 minutes A1

At = 6:33 pm

At = 6:36 pm

At = 6:39 pm

5. Area of ceiling $(10 \times 7) = 70M^2$ B2

Area of walls $(7 \times 4)2 = 56M^2$ B2

Area of wall $(10 \times 4)2 = 80M^2$ B2

Total Surface Area =

$70 + 56 + 80 = 206M^2$ B2

Cost of painting $= 206 \times 200$ M1

$= 41,200$ A1

14 $\frac{6-3}{-1+2} = \frac{y-6}{x+1}$ M1

(a) $y - 6 = 3x + 3$

$9 = 3$

$y = 3x + 9$ A1

(b) $-\frac{1}{3} = \frac{y-6}{x+1}$ M1

$3y - 18 = -x - 1$

$3y = -x + 17$

$y = -\frac{1}{3}x + \frac{17}{3}$ A1

(c) $3 = \frac{y-2}{x-1}$ M1

$y - 2 = 3x - 3$

$y = 3x - 1$ A1

x - Intercept $(\frac{1}{3}, 0)$ A1

y - Intercept $(0, -1)$

(d) $3x - 1 = -\frac{1}{3}x + \frac{17}{3}$ M1

$9x - 3 = -x + 17$

$10x = 20$

$x = 2$ M1

$y = 5$

(2, 5) A1

11. $15500x + 2400y = 43,000$

$155x + 24y = 430$ ---(i)

$7750x + 4800y = 39500$ B1

$155x + 96y = 790$ ---(ii)

$155x + 24y = 430$

$72y = 360$ B1

$y = 5$ A1

$155x = 430 - 120$

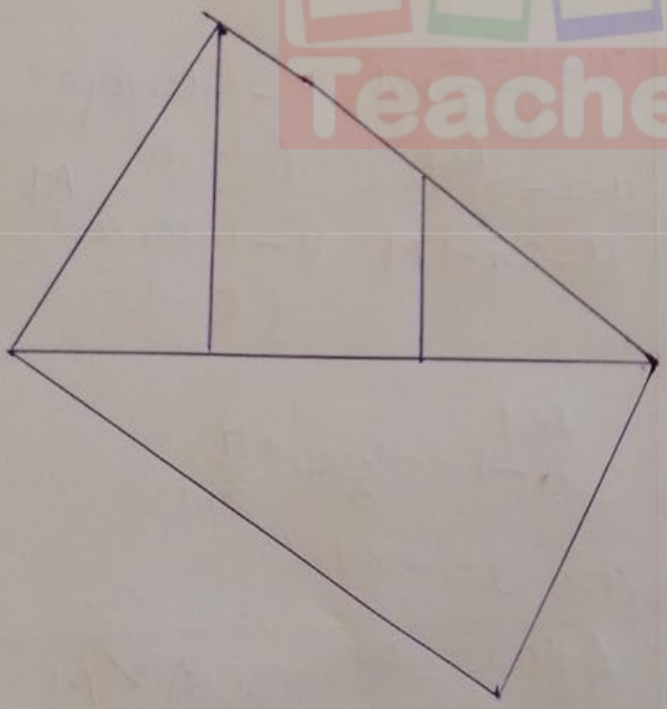
$155x = 310$

$x = 2$ M1

number of bulls = 2

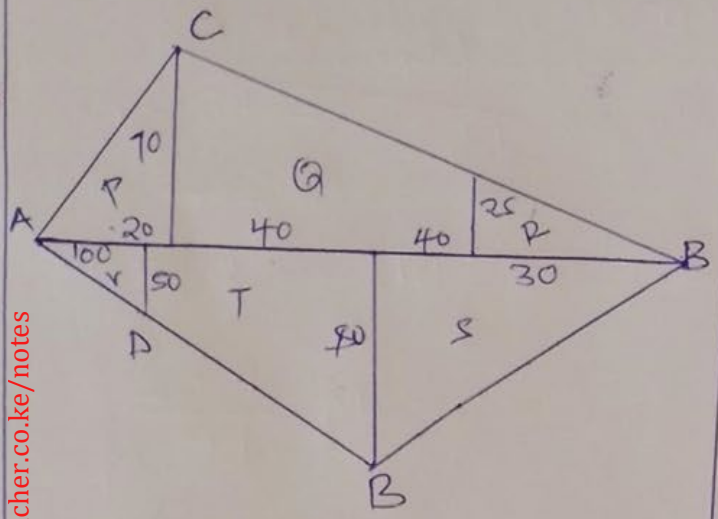
number of goats = 5 M1

12.



13.

12.



Area $P = \frac{1}{2} \times 120 \times 70 = 4200 m^2$

My $Q = \frac{1}{2} \times 80(75+40) = 40 \times 115$

$= 4600 m^2$

My $R = \frac{1}{2} \times 80 \times 25 = 1000 M^2$

My $S = \frac{1}{2} \times 120 \times 80 = 4800 M^2$

My $T = \frac{1}{2} \times 60(80+50) = 30 \times 130$

$= 3900 m^2$

My $V = \frac{1}{2} \times 100 \times 50 = 2500 M^2$

Total Area $= 4200 + 4600 + 1000$

$+ 4800 + 3900 +$

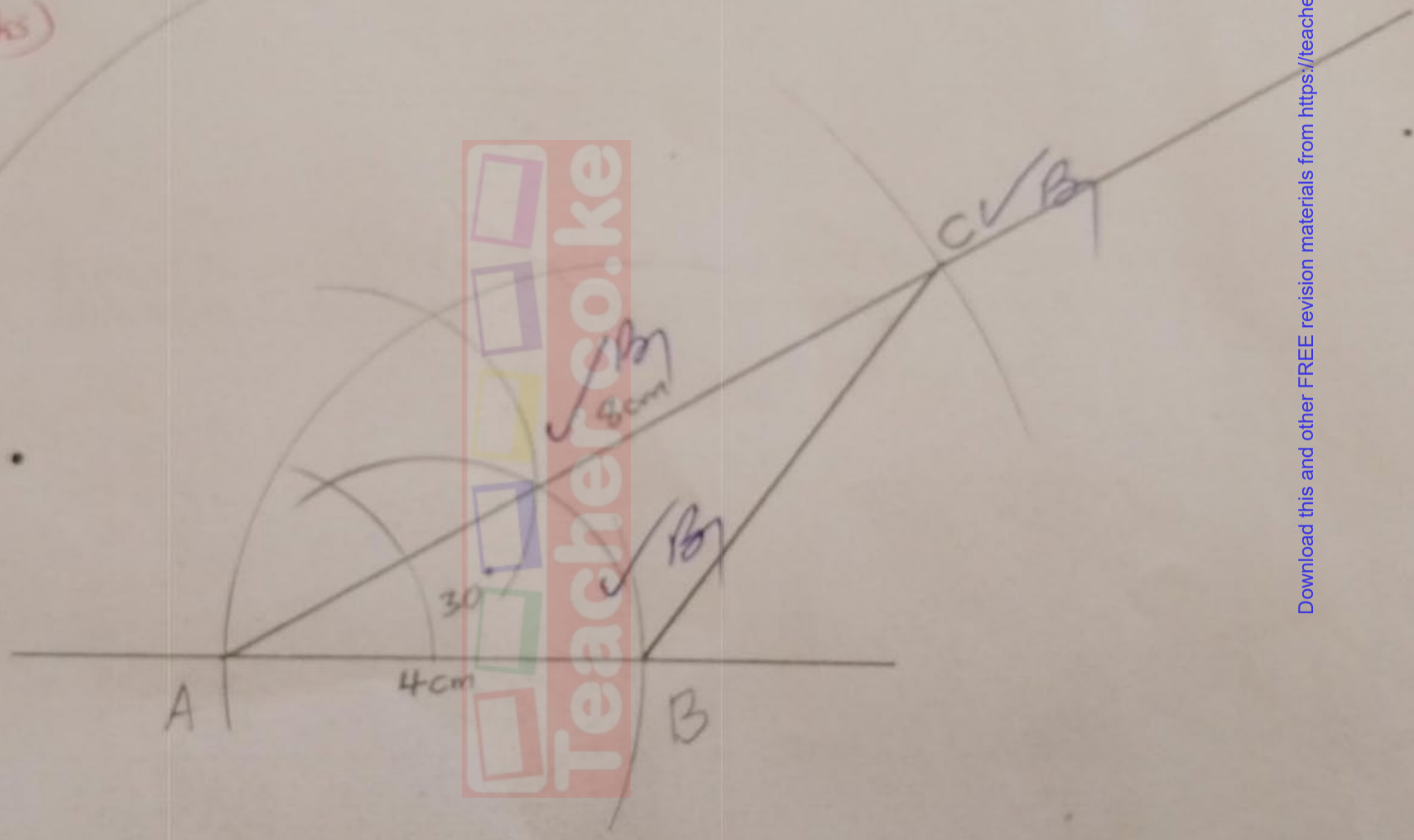
$2500 = 21000 m^2$ A1

$= \frac{21000 m^2}{10000}$

$= 2.1 ha$ A1

64 = 540 - 60

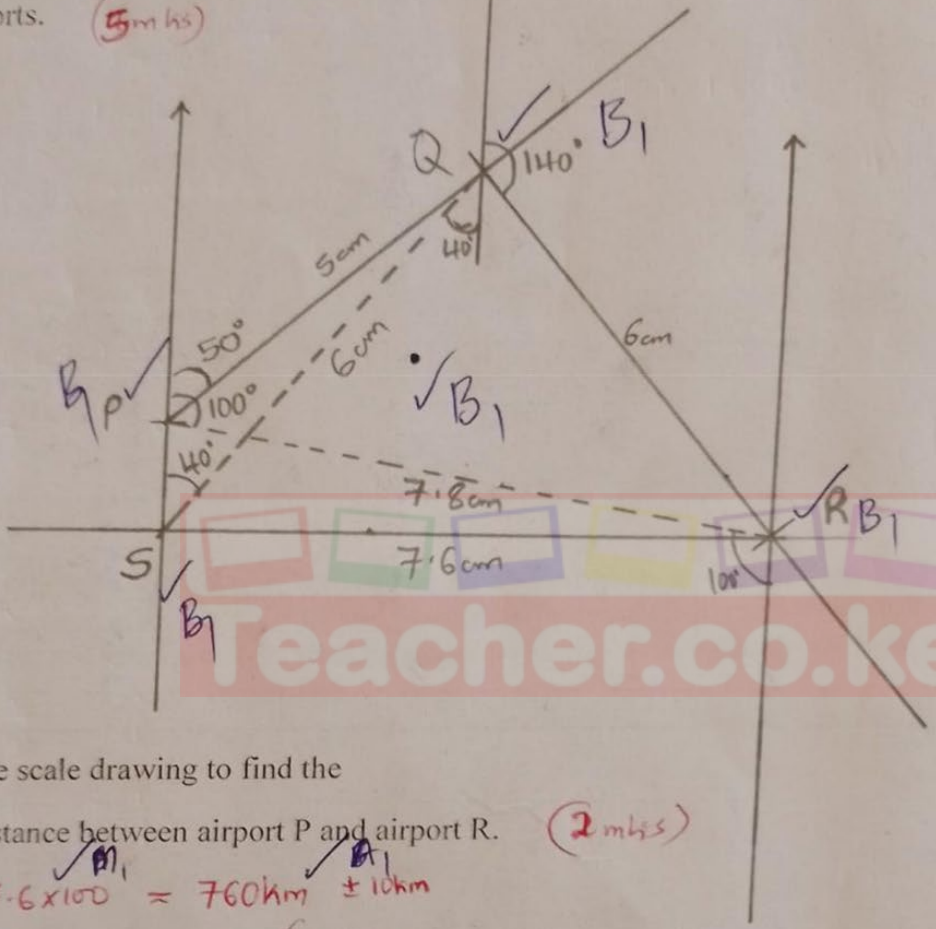
Using a ruler and a pair of compasses only, construct triangle ABC such that AB = 4 cm, AC = 8 cm and ∠BAC = 30°. (3mks)



13

10 ~~15~~ A plane leaves airport P for airport Q, 500 km away on a bearing of 050°. It then flies to airport R 600km away on a bearing of 140°. From R, it flies west to another airport S which is to the south of P.

(a) Use a scale of 1 cm represents 100 km, draw a diagram showing the relative positions of the four airports. (5mks)



(b) Use the scale drawing to find the

(i) Distance between airport P and airport R. (2mks)

7.6 × 100 = 760km ± 10km
B1 B1

(ii) Bearing of R from P. (1mk)

100° B1

(iii) Distance and bearing of S from Q (2mks)

6 × 100 = 600km ± 10km B1

220° ± 1° B1

13