

KJSEA Trial Papers Answers
Paper 1

Section A

- | | |
|-------|-------|
| 1. A | 11. B |
| 2. A | 12. D |
| 3. C | 13. C |
| 4. A | 14. C |
| 5. C | 15. B |
| 6. B | 16. C |
| 7. A | 17. B |
| 8. A | 18. A |
| 9. B | 19. A |
| 10. C | 20. C |

Section B

21. (a) 7 (b) 790 000
22. (a) 1.563×10^3 (b) 2 000 (c) 2 443 000 m²
23. (a) $\frac{1}{6}$ (b) 60 ha
24. (a) 12:35 (b) 35
25. (a) $\frac{7}{12}$ (b) $\frac{12}{7}$ hours
26. (a) 5.275×10^3 (b) 17.4 cm
27. 8
28. (a) 3 267 (b) 3 806
29. (a) $-3\,800 - 500 + 900$ (b) KSh. 3 400
30. $x = 3, y = 2$

31. (a) $\begin{pmatrix} 5 & 8 & 5 \\ 6 & 4 & 3 \\ 3 & 2 & 6 \end{pmatrix}, \begin{pmatrix} 11 & 3 & 5 \\ 4 & 5 & 1 \\ 9 & 0 & 7 \end{pmatrix}$

(b) 3×3

(c) Ali: cars 16, lorries 11, buses 10; Nina: cars 10, lorries 9, buses 4; Oloo: cars 12, lorries 2, buses 13

32. (a) $M = \frac{y^1 - y^2}{x^1 - x^2}$

(b) $y = mx + c$

(c) $y = 1$

33. KSh. 4 739

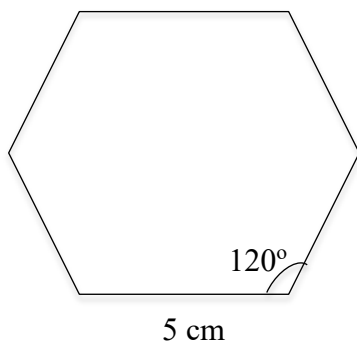
34. (a) Ali KSh. 7 500, Mwanzia KSh. 32 000

(b) KSh. 24 500

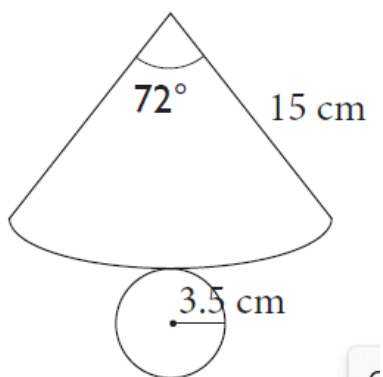
35. (a) 6

(b) 120°

(c)



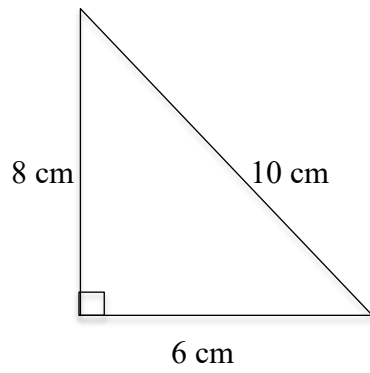
36. (a)



(b) 179.9 cm^2

37. (a) 1:500 000

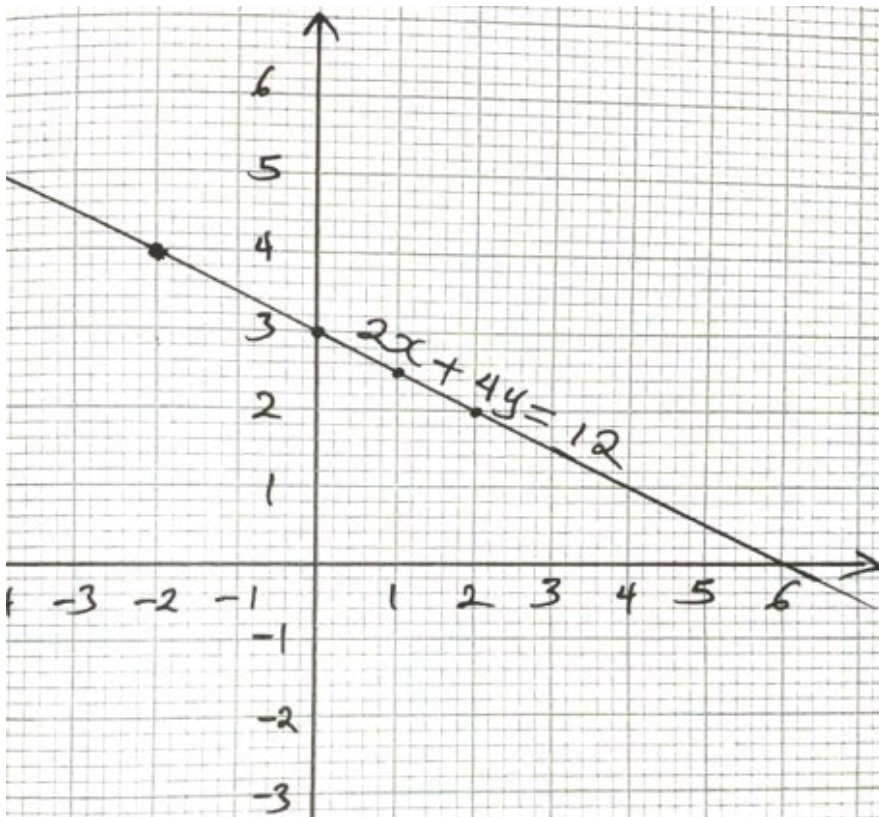
(b)



38. (a)

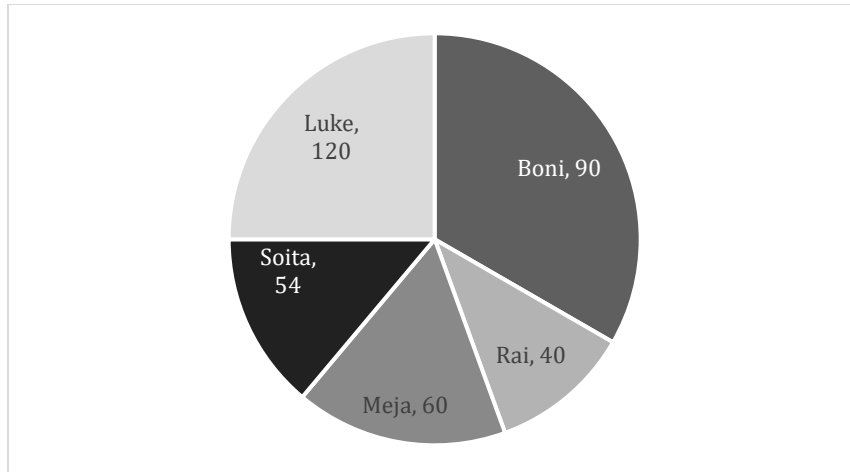
x	-2	0	1	2
y	4	3	2.5	2

(b)



39. (a) Boni 90° , Rai 36° , Meja 60° , Soita 54° , Luke 120°

(b)



40. (a)

Marks	8	9	10	12	14	15
Frequency	2	2	2	6	4	2

(b) (i) 12

(ii) 12

(iii) 13.4

Paper 2

Section A

- | | |
|-------|-------|
| 1. D | 11. C |
| 2. D | 12. A |
| 3. C | 13. D |
| 4. B | 14. C |
| 5. A | 15. D |
| 6. A | 16. D |
| 7. B | 17. C |
| 8. A | 18. D |
| 9. C | 19. B |
| 10. A | 20. A |

Section B

21. (a) Seven thousand eight hundred and sixty-nine point nine, eight, five kilograms.

(b) Thousandths

(c) 7 869.9

22. $\frac{7}{30}$

23. (a) $\frac{3}{20}$

(b) KSh. 90 000

24. (a) $2y = 5x - 17$

(b) $x = -2$ hence x -intercept is at $(-2, 0)$

25. $5\frac{5}{7}$ months

26. KSh. 134 400

27. $32\,074.58\text{ cm}^3$

28. 128 m^2

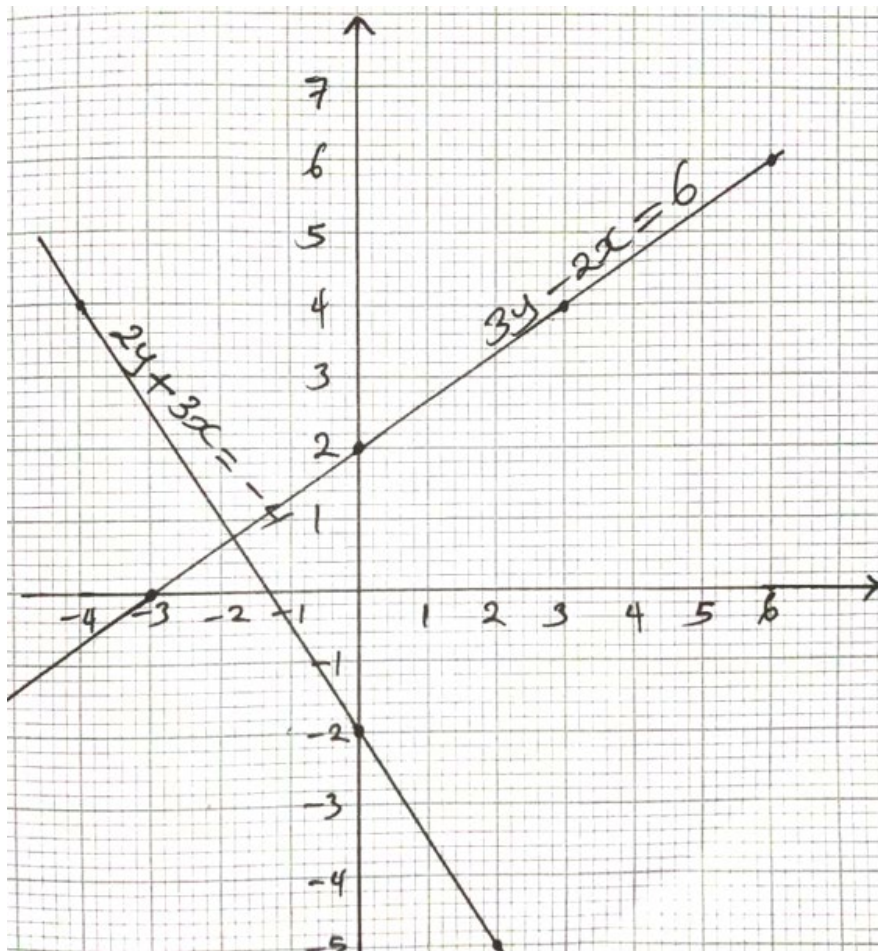
29. 4:35 p.m, 7:15 p.m

30. 135 km

31. 068° , 229° ; 1 017 m

32. 62° , 118° , 59°

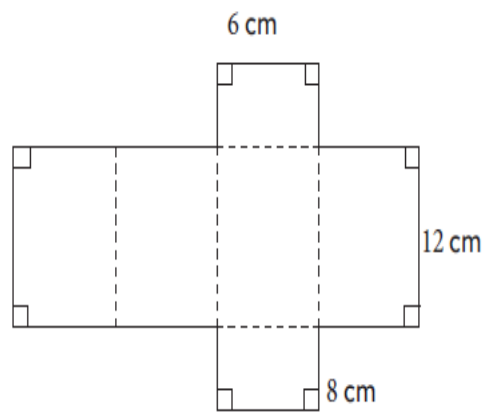
33.



34. (a) 23.2°

35. 25.64, class width = 10

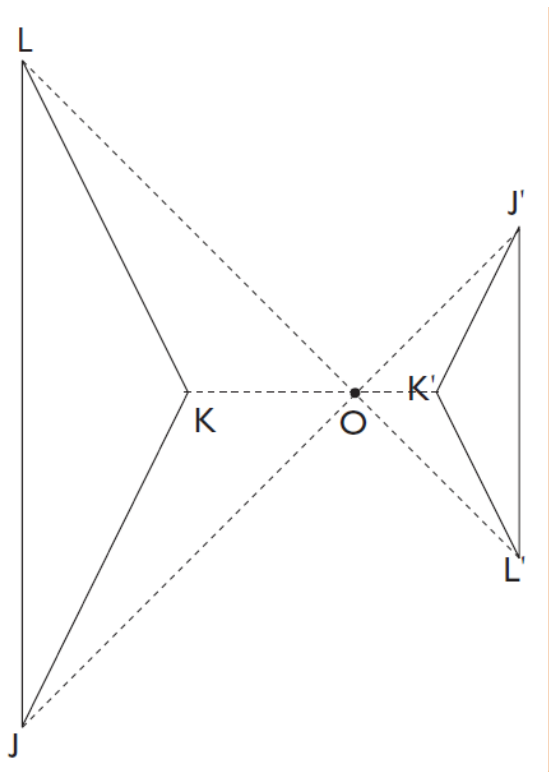
36. (a)



(b) 23.74 cm

37. 5.97 m

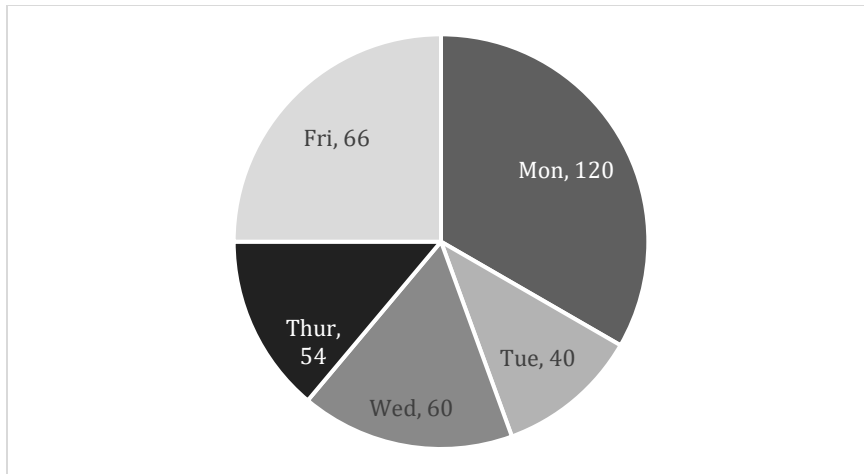
38. (a)



(b) $JK = 1.5$ cm, $KL = 1.5$ cm and $JL = 2.5$ cm

39. $\frac{4}{11}, \frac{5}{11}$

40.



Paper 3

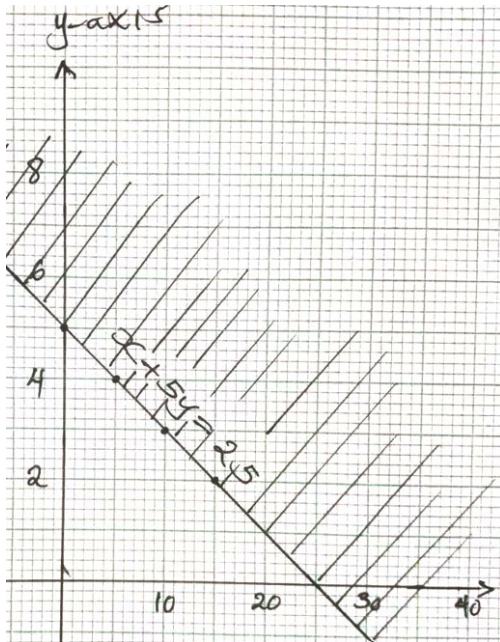
Section A

- | | |
|-------|-------|
| 1. A | 11. C |
| 2. B | 12. C |
| 3. C | 13. A |
| 4. B | 14. B |
| 5. C | 15. B |
| 6. D | 16. C |
| 7. A | 17. C |
| 8. D | 18. D |
| 9. D | 19. C |
| 10. A | 20. C |

Section B

- | | | |
|-----------------------|----------|----------|
| 21. (a) Thousandths | (b) 13.0 | (c) 9.92 |
| 22. 14 m | | |
| 23. 12.2 m | | |
| 24. 900 tiles | | |
| 25. 6 more days | | |
| 26. $3x + 16$ 500 | | |
| 27. KSh. 90 | | |
| 28. (a) $x + 5y < 25$ | | |

(b)



29. (a) 3 264 m

(b) 130.56 hectometres

30. 252 cm^3

31. 18 cm^3

32. 5 m^2

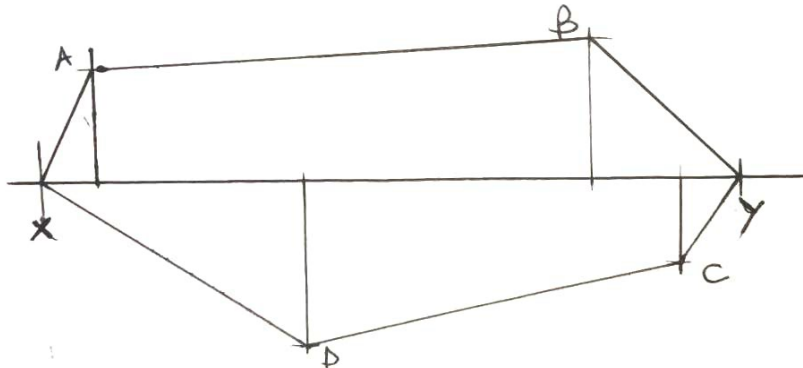
33. KSh. 68 500

34. (a) 100°

(b) 120°

35. $XZ = 4.1 \text{ cm}$

36.



37. 139.8 cm^2

38. (a) 2

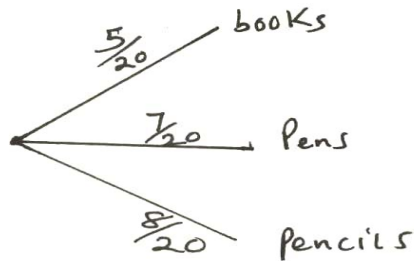
(b) (0, 0)

(c) Enlargement scale factor 2 centre (0, 0)

39. 70–79 years

40. (a) $\frac{7}{20}$

(b)



Paper 4

Section A

1. C

11. A

2. A

12. C

3. C

13. D

4. C

14. B

5. A

15. B

6. A

16. B

7. C

17. B

8. B

18. C

9. C

19. A

10. B

20. A

Section B

21. (a) 180

(b) 3 192 m

(c) 2 000

22. (a) 5.832 m^3

(b) 91.125 boxes

23. (a) 32 goats

(b) 24 more sheep

24. 25 days

25. $\frac{29}{100}$

26. KSh. 30 for each

27. (a) $\begin{pmatrix} 70 & 150 & 50 \\ 90 & 200 & 30 \end{pmatrix}, \begin{pmatrix} 60 & 100 & 40 \\ 140 & 150 & 80 \end{pmatrix}$

(b) Ben = 470 bags, Jacob = 690 bags

28. (a) $y = -2/3x + 7$

(b) x -intercept = 10.5

29. 802.34 cm^2

30. 1.35 cm

31. (a) 2.5 m

(b) 0.00389 kg/cm^3

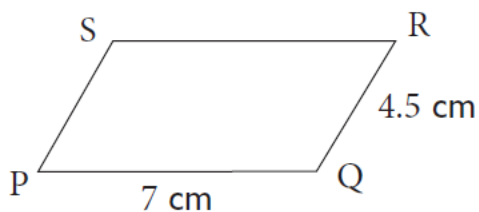
32. 4:04 a.m

33. (a) KSh.600 000

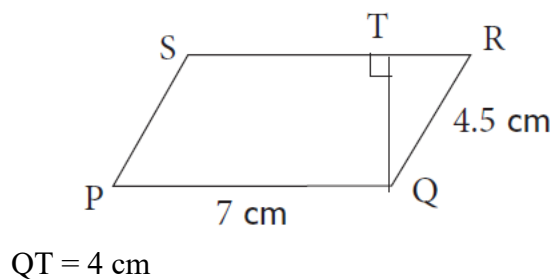
(b) KSh.300 000

(c) KSh. 528 000

34. (a)



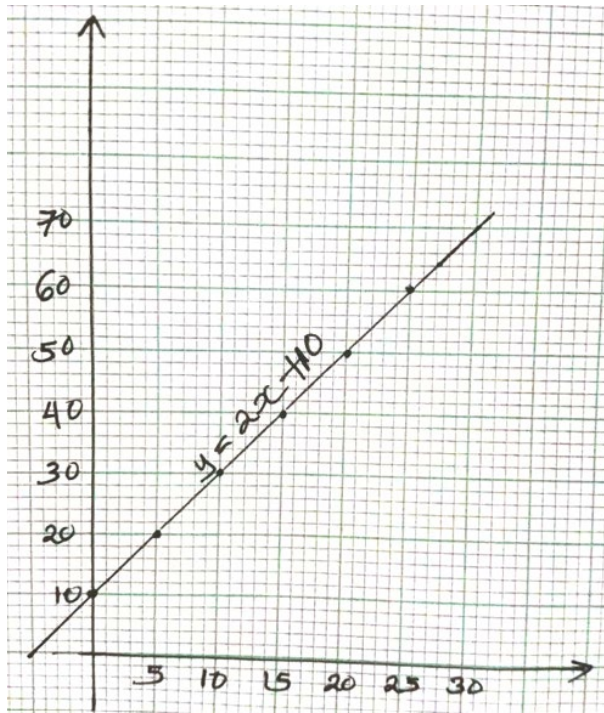
(b)



35. (a)

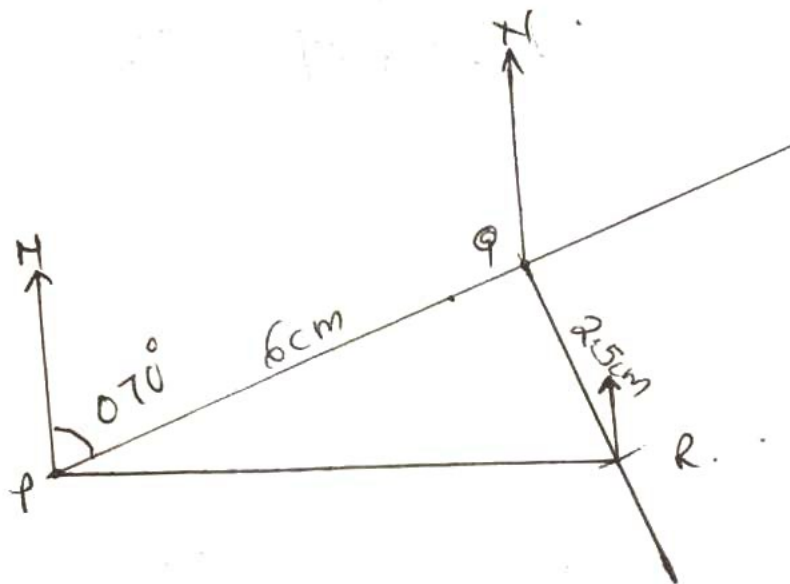
x	0	5	10	15	20	25
y	10	20	30	40	50	60

(b)



36. 6 m

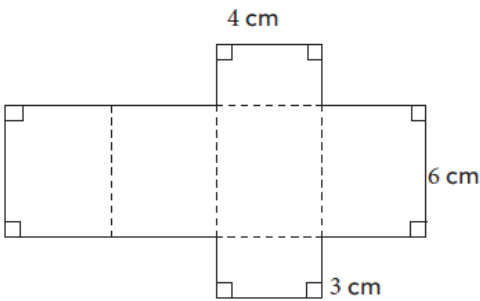
37. (a)



(b) PR = 13 km

(c) 250°

38. (a)



(b) 108 cm^2

39. (a) The frequency distribution table may vary.

(b) 22.92

40. (a) $\frac{1}{2}$

(b)

Coin	Die						
		1	2	3	4	5	6
	H	H1	H2	H3	H4	H5	H6
	T	T1	T2	T3	T4	T5	T6

Paper 5

Section A

- | | |
|-------|-------|
| 1. D | 11. C |
| 2. A | 12. C |
| 3. A | 13. C |
| 4. C | 14. A |
| 5. B | 15. C |
| 6. B | 16. C |
| 7. C | 17. B |
| 8. D | 18. C |
| 9. C | 19. C |
| 10. B | 20. B |

Section B

21. 6 000 times

22. 16 m

23. (a) $\frac{2}{15}$

(b) KSh. 4 500

24. 2 025 tiles

25. 4 days longer

26. $38\,808\text{ cm}^3$

27. Cost of a shirt is KSh. 300 and trouser Sh. is 1 500

28. $15 < n \leq 20$

29. (a) 2 450 m (b) 255 decametres

30. $92\,925\text{ m}^2$ or 9.29 ha

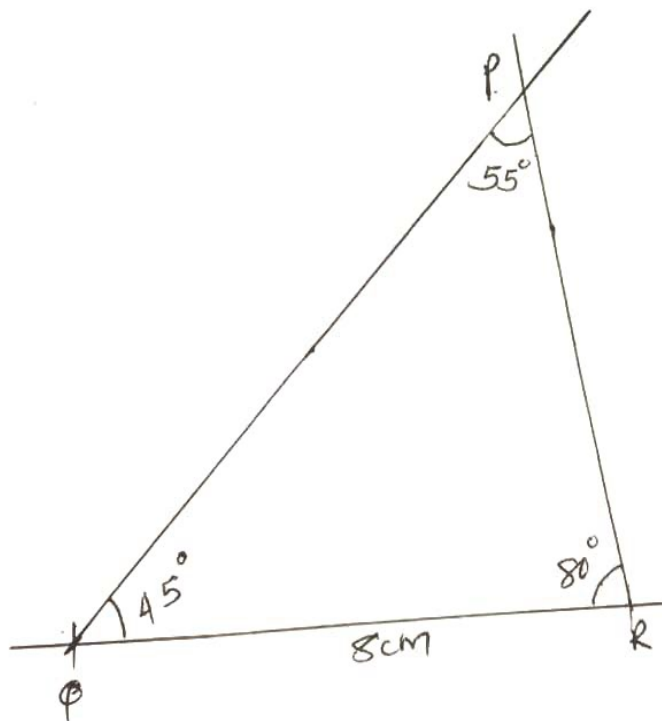
31. 6 m

32. 5 m/s

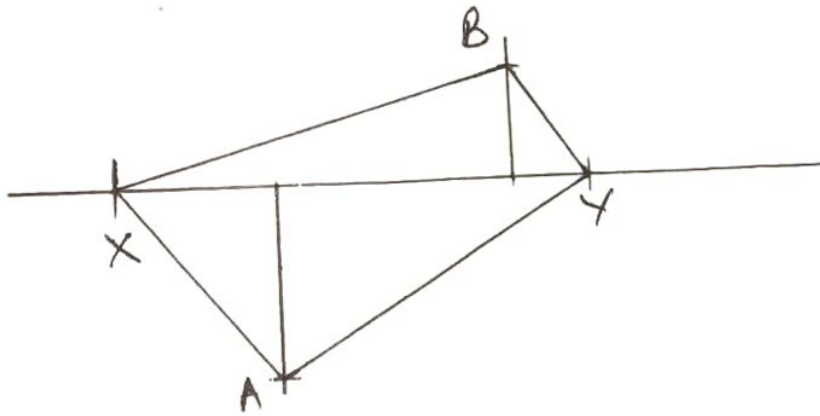
33. KSh. 61 580

34. 76°

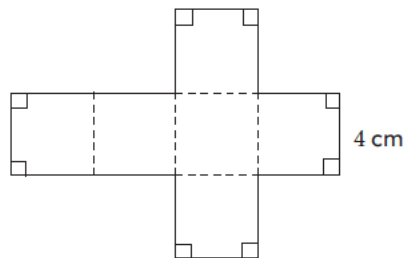
35.



36.



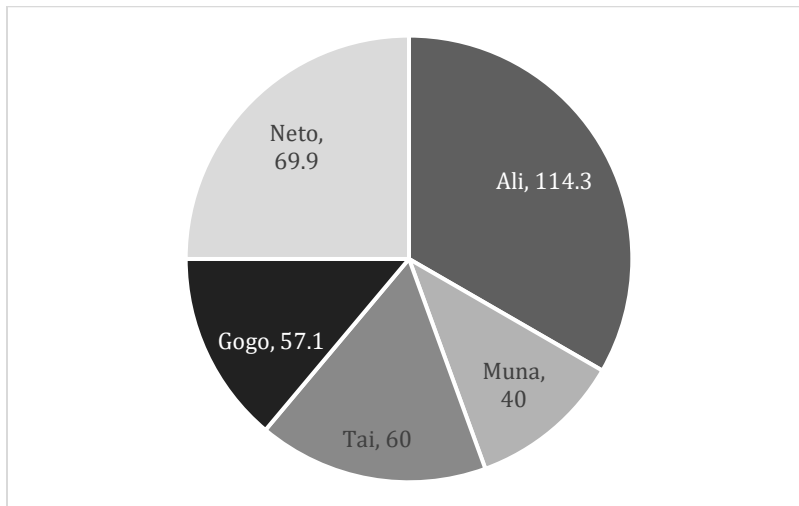
37. (a)



(b) 96 cm^2

38. KSh. 875 000

39.



40. (a) $\frac{1}{12}$

(b) $\frac{1}{4}$

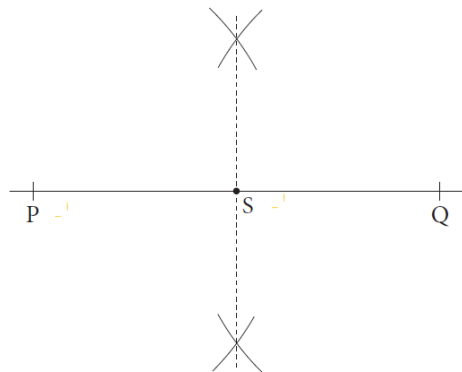
Paper 6

Section A

- | | |
|-------|-------|
| 1. A | 11. B |
| 2. C | 12. B |
| 3. D | 13. C |
| 4. B | 14. A |
| 5. D | 15. A |
| 6. B | 16. C |
| 7. B | 17. C |
| 8. A | 18. D |
| 9. C | 19. B |
| 10. A | 20. B |

Section B

21. KSh. 136.80
22. $x = 0$
23. 10 hours 40 minutes per day
24. 30 chickens and 20 turkeys
25. 6.16 cm^2
26. $38\,808 \text{ cm}^3$
27. (a) KSh. 85 000 (b) KSh. 34 000
28. $\frac{5}{6}, \frac{3}{5}, \frac{4}{9}, \frac{2}{7}, \frac{1}{4}$
29. 26 members
30. 9 cm
31. (a) KSh. 9 200 (b) KSh. 8 400
- 32.



33. 5

34. 10.5cm^2
 35. 4:7
 36. 0.005 kg/cm^3
 37. 3 rows and 3 columns
 38. KSh.875 000
 39. 4.28×10^{-3}
 40. 0.0676 m^2

Paper 7

Section A

- | | |
|-------|-------|
| 1. B | 11. C |
| 2. C | 12. A |
| 3. C | 13. C |
| 4. B | 14. A |
| 5. A | 15. A |
| 6. C | 16. A |
| 7. A | 17. D |
| 8. C | 18. A |
| 9. C | 19. B |
| 10. A | 20. B |

Section B

21. -22 m (That is 22 m below seal level)
 22. 123 m^2
 23. (a) $-\frac{4}{3}$ (b) $y = -\frac{4}{3}x - \frac{1}{3}$ (c) $y = \frac{3}{4}x - \frac{1}{2}$
 24. $x = 4, y = 2$
 25. (a) 13 cm (b) $2\,197\text{ cm}^3$ (c) 34.33 cm
 26. (a) $\frac{1}{8}$ (b) $\frac{1}{6}$ (c) 3 hours 26 minutes
 27. 7:40 a.m.
 28. (a) Length = $2w + 40$, perimeter = $(6w + 80)$ metres
 (b) Equation: $6w + 80 = 280$. So, length = $106\frac{2}{3}\text{ m}$ or 106.67 m and width = $33\frac{1}{3}\text{ m}$
 or 33.33 m
 (c) 3555.56 m^2
 29. (a) $50 - 59$ (b) 45.7 kg (c) $40 - 49$
 30. (a) 5.85 m (b) $3\,000\text{ kg/m}^3$

31. (a) KSh. 129 960

(b) KSh. 29 960

(c) KSh. 1 960 less

32. (a) 4.2 km

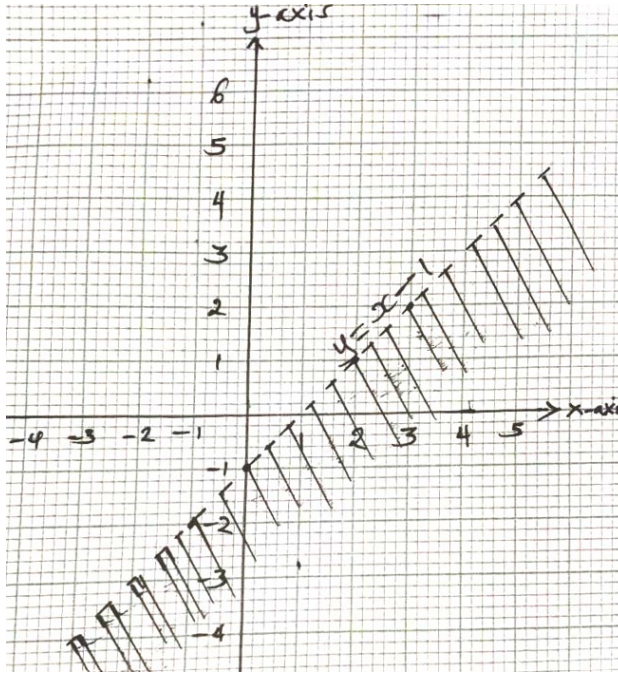
(b) 14.29 cm

(c) 686 hectares

33. (a)

x	-1	0	2	3
y	-2	-1	1	2

(b)



(c) Healthy plants grow above the line, so $y > x - 1$.

34. (a) Ali = 160 kg, Ben = 240 kg and Chris = 320 kg

(b) $\frac{1}{3}$

35. 0.15

Paper 8

Section A

1. D

8. A

2. A

9. A

3. A

10. B

4. B

11. B

5. B

12. A

6. A

13. B

7. C

14. A

15. C

16. A

17. B

18. A

19. A

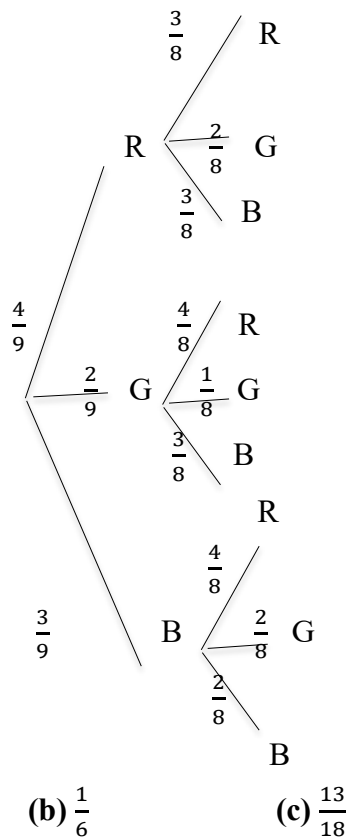
20. C

Section B

21. $3^7 = 2\,187$

22. 42.22 m/s

23. (a)



24. (a) 13 860 cm³

(b) 24.0 cm (c) 135.83 kg

25. $x = 1, 2, 3, \dots$

26. (a) The frequency distribution table may vary

(b) Mean = 6.6

(c) Median = 6.5, modes are 6 and 7

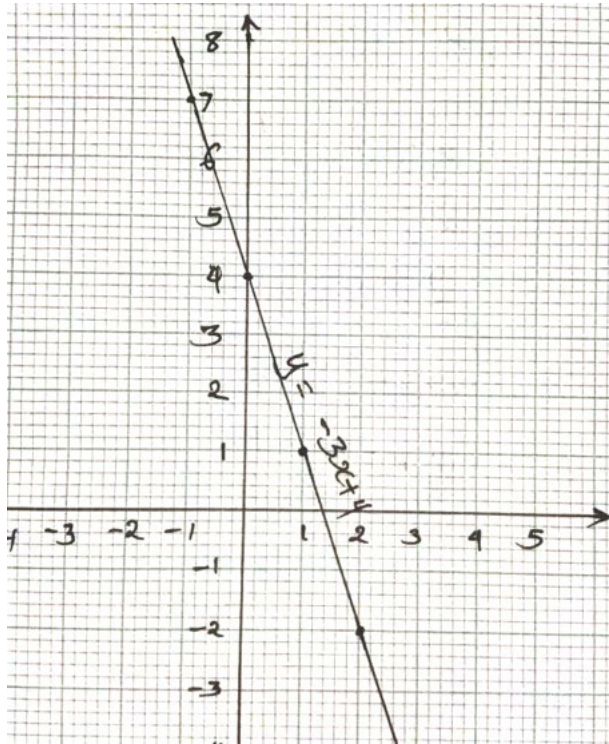
27. (a) 33 880 litres

(b) 18 h 49 min

28. (a)

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

(b)



29. $y = -\frac{1}{3}x + \frac{7}{3}$

30. (a) KSh.130

(b) KSh. 85

(c) 15% profit

31. (a) $-55 + 20 - 16$

(b) -51 m

32. (a) 9 cm

(b) 486 cm^2

33. (a) 480 g

(b) 15 people

34. (a) 4

(b) $y = 4x - 14$

35. (a) 300

(b) 180

(c) 3:2

Paper 9

Section A

1. A

9. A

2. C

10. A

3. B

11. C

4. B

12. A

5. A

13. D

6. B

14. B

7. A

15. A

8. A

16. A

17. B

19. D

18. C

20. D

Section B

21. 720 litres

22. (a) $3s + 4b = 2$, $2s + 3b = 190$

(b) KSh. 20 per *samosa* and KSh. 50 per bun

(c) KSh. 180

23. (a) 5.5 tonnes = 5 500 kg

(b) 7200 s = 2 hours

(c) 6.6 km = 660 000 cm

24. $3m - 8n$

25. 12 m

26. 9 boys

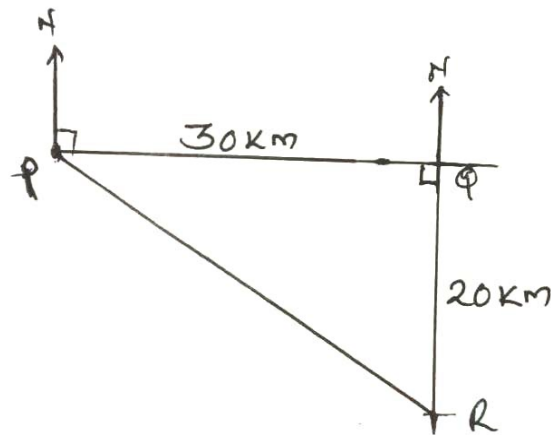
27. -5

28. (a) KSh. 38 000

(b) KSh. 6 000

(c) KSh. 43 000

29. (a)



(b) 124°

(c) $PR = 36.1 \text{ km}$

30. 4.16 m

31. (a) KSh. 72 000

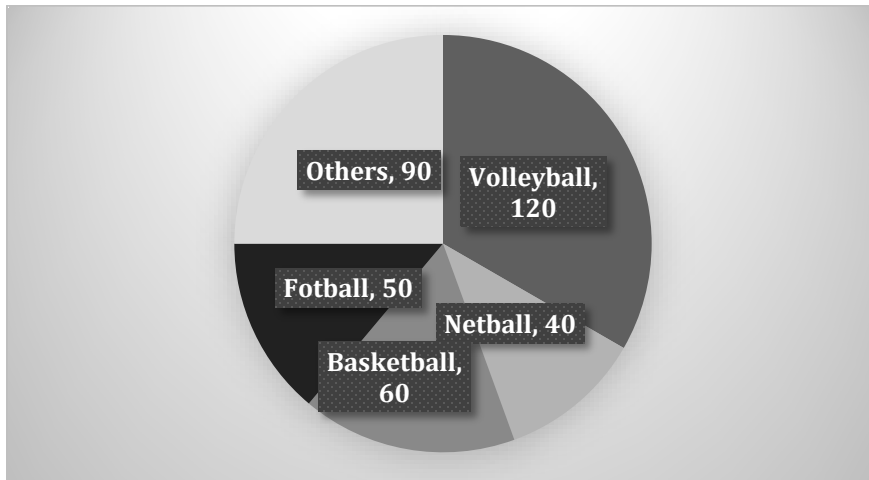
(b) KSh. 60 000

(c) KSh. 30 000

(d) KSh. 3 145 920

32. (a) Volleyball = 120° , netball = 40° , basketball = 60° , football = 50° , others = 90°

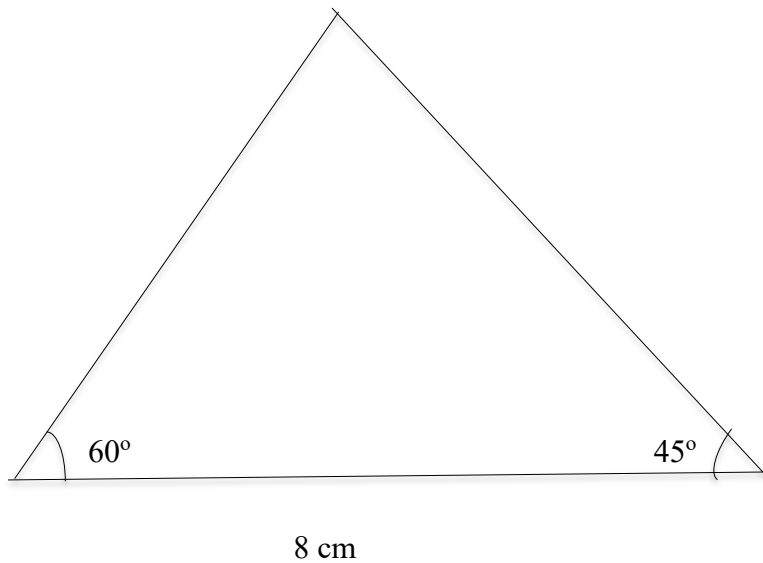
(b)



33. -1, 0, 1, 2, 3

34. 360 cm^2

35. $XZ = 5.86 \text{ cm}$



36. (a) 50 minutes

(b) KQ102

(c) 14:50

37. 18 extra workers

38. $4y - 5\,000$

39. 1 200 tiles

40. 11°C

Paper 10

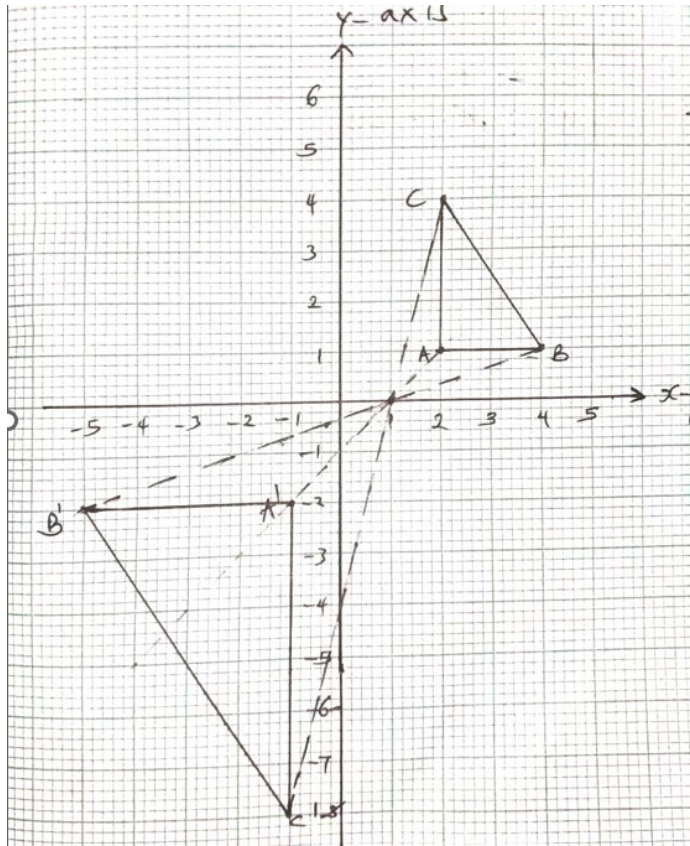
Section A

- | | |
|-------|-------|
| 1. C | 11. A |
| 2. A | 12. C |
| 3. B | 13. D |
| 4. B | 14. D |
| 5. B | 15. B |
| 6. B | 16. C |
| 7. C | 17. A |
| 8. B | 18. C |
| 9. A | 19. A |
| 10. D | 20. C |

Section B

21. (a) 100 000 (b) 6 000
(c) 86 700 (d) 8.6745×10^4
22. Tamara KSh. 540 000, Wairimu KSh. 360 000, Ndanu KSh. 450 000, Simaloi KSh. 270 000, Ayan KSh. 180 000
23. (a) $\frac{3}{5}$ (b) 50 litres
24. 2
25. 27.65 m
26. KSh. 800 per shirt and KSh. 1 000 per trouser
27. (a) $y = -\frac{2}{3}x + \frac{5}{3}$ (b) $-\frac{2}{3}$ (c) x-intercept = 2.5
28. (a) $\begin{pmatrix} 3 & 2 \\ 7 & 2 \end{pmatrix}$ (b) $\begin{pmatrix} -1 & -2 \\ -3 & 10 \end{pmatrix}$
29. (a) 2 (b) $y = 2x - 5$ (c) $y = -\frac{1}{2}x$
30. 276.57 cm²
31. 1 630 cm²
32. 1 400 cm³
33. KSh. 15 730.40
34. (a) KSh. 50 000 (b) KSh. 25 000 (c) KSh. 44 000
35. (a) KSh. 5 321.50 (b) KSh. 15 821.50
36. (a) 35.16 m (b) 49.53°

37.



$A'(-1, -2)$, $B'(-5, -2)$, $C'(-1, -8)$

38. (a) 5 m

(b) 22.62°

39. (a) $x = 14$

(b) 15

(c) 14

40. (a) $\frac{1}{2}$

(b) $\frac{1}{2}$

(c) $\frac{3}{8}$