

MATHEMATICS TEST 1 - ANSWERS

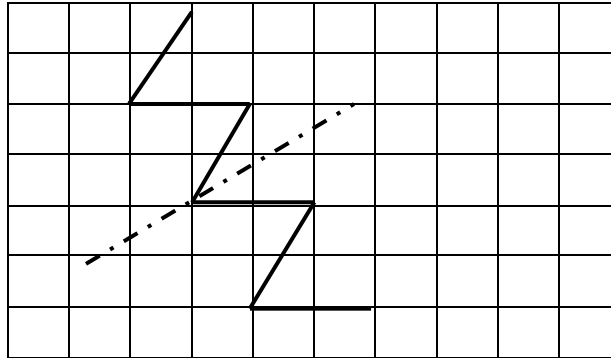
1. 40.32 2. 25000 3. 411 4. 8.09 5. 448 6. $3\frac{2}{5}$ 7. 0

8. $\frac{1}{10}$ 9. \$10 10. 108 11. < 12. $\frac{3000}{6} = 500g$ 13. Wednesday

14. ($2 \times 2 \times 2 = 8\text{cm}^3$ for small cube) ($27 \times 8 = 216\text{cm}^3$ for large cube)

15. Parallelogram

16.



17. C – triangular base prism 18. $58 \times 5 = 290$ 19. 32 20. $4 \times 6 = 24$

21. 25 and 23 22. 8 poles = 7 spaces ($9.5 \times 7 = 66.5\text{m}$)

23. ($\frac{240}{6} = 40$ tables) ($40 \times 5 = 200$ chairs) ($200 - 17 = 183$) ($\frac{183}{3} = 61$ chairs)

24. Purchasing one of each snack will cost Sita \$23. She will have a balance of \$22. She can buy 2 Nuts and 2 Juice with the change to give a total of 7 snacks and no money remaining.

25. ($\frac{20}{100} \times \frac{165}{1} = \33) ($165 - 33 = \$132$) 26. ($55 - 8 = 47$) and ($47 - 7 = 40$)

27. Using a common factor of 4 to multiply the numerator and denominator of $\frac{2}{3}$ will show that the two fractions are equivalent fractions. Therefore the two fractions are equal.



28. S.I. = $9000 \times \frac{10}{100} \times 3 = \2700 (Total to repay = $(9000 + 2700 = \$11700)$) ($\frac{11700}{36\text{months}} = \325)

29. ($24 + 9 = 33$) ($33 \times 7 = 231$) 30. ($0.25 = \frac{25}{100} = 25\%$ or $\frac{1}{4}$) ($\frac{3}{4} = 75\%$) Therefore, both answers are correct since both answers will result in one whole. (Any diagram to show 3 parts and 1 part to make one whole.)

31. $58 - (18 \times 2) = 22$ ($\text{width} = \frac{22}{2} = 11\text{cm}$) Area = $18 \times 11 = 198$

32. ($800\text{cm} - 465\text{cm} = 335\text{cm}$ or $3\text{m } 35\text{cm}$)

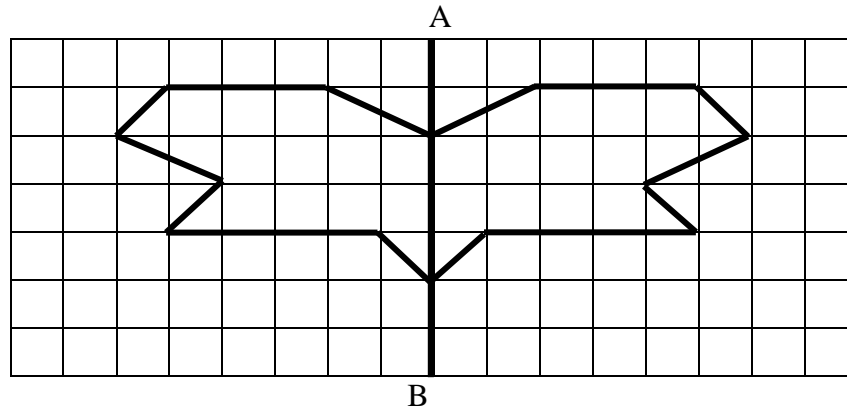
33. $(20 \times 20 \times 20 = 8000\text{cm}^3)$ ($\frac{3}{4} \times \frac{8000}{1} = 6000\text{cm}^3 = 6 \text{ litres}$)

34. $(800 \times 600) \div (40 \times 20) = 600\text{tiles}$ ($600 \times 12 = \$7200$)

35.

Triangle	Type of Triangle
A	Equilateral triangle
B	Isosceles triangle
C	Scalene triangle

36.



37. 6 right angles 38. $(28 \times 4 = 112)$ ($112 - 80 = 32$) ($\frac{32}{4} = 8$) Therefore, 3 missing fruits to be drawn to complete plums.

39. $(60 + 35 + 55) \div 3 = 50$ ($50 \times 2 = 100$) ($100 - 84 = 16$)

40. Martin (Martin and Laura) This/These parents are able to convince more people to purchase tickets. They sell tickets at a faster rate than the other parents.

41. $(\frac{20}{100} \times 7200 = \$1440)$ ($7200 - 1440 = \$5760$) ($\frac{1}{8} \times 5760 = \720)

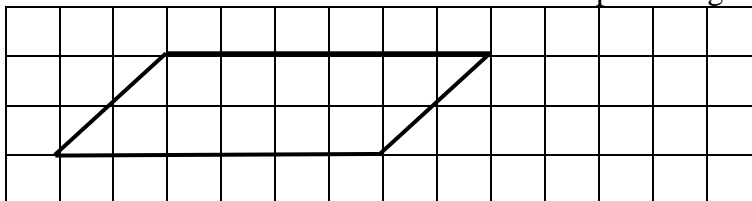
$(5760 + 720 = \$6480)$ 42.a. $(7.5 \times 4 = 30\text{kg})$ ($\frac{30}{5} = 6\text{kg per pack}$) b. $(180 \times 4 = 720)$

$(720 + 140 = \$840)$ ($\frac{840}{5} = \$168$)

43. $(DW = 140 \div 20 = 7\text{cm})$ ($AD = 7 + 7 = 14\text{cm}$) ($AB = CD = \frac{84}{14} = 6\text{cm}$)

(Area of shaded part = $7 \times 6 = 42\text{cm}^2$)

44. a.

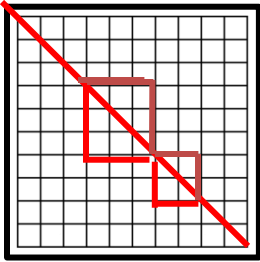


b. parallelogram

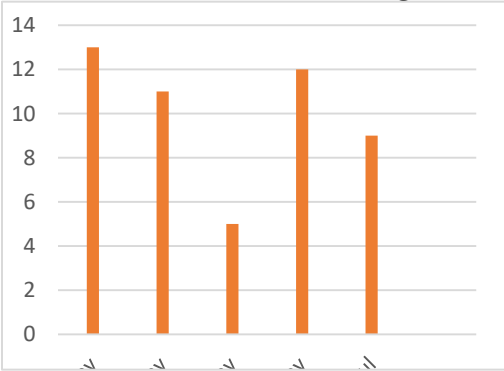
45. (Total stamps collected = $30 \times 5 = 150$) (8×1) + (7×4) + (6×3) + (5×8) = $8 + 28 + 18 + 40 = 94$) ($150 - 94 = 56$) ($56 \div 4 = 14 \text{ stamps}$)

MATHEMATICS TEST TWO – ANSWERS

1. Eight hundred and seven thousand and three. 2. 5.22 3. 1374 4. 4 5. $\frac{15}{4}$
 6. $\frac{1}{4} \times \frac{80}{1} = 20$ 7. $32 \times 5 = 160$ 8. 100 9. 0.08 10. 3 11. 4.83kg
 12. $12 \times 4 = 48\text{cm}^2$ 13. $\frac{1200}{1000} = 1.2 \text{ litres}$ 14. $6\text{cm} - 2\text{cm} = 4\text{cm}$



15. 16. Angle C 17. Cube 18. 4 fishes 19. 7



20. 21. $6\frac{5}{6} + 1\frac{2}{3}$ ($\frac{5}{6} + \frac{2}{3} = \frac{9}{6} = 1\frac{1}{2}$) *Ans* = $8\frac{1}{2}$ 22. *Whole* = $\frac{60}{1} \times \frac{4}{3} = 80$ ($\frac{3}{5} \times \frac{80}{1} = 48$)

23. ($8 \times 9 = 72$) ($72 - 4 = 68$) ($68 \div 2 = 34$) ($34 + 4 = 38$ years old)

24. Ryan will make more money. Ryan will have less in a heap for the same price which means he is selling at a higher price. Ryan will have more heaps to sell and will end up with more money after selling more heaps than David.

25. $\frac{150}{9} = 16 \text{ R } 6$ ($9 - 6 = 3$ more persons)

26. ($\frac{1}{3}$ remainder = 20) (*Remainder* = $20 \times 3 = 60$) ($\frac{4}{5} = 60$) (*Total* = $\frac{60}{1} \times \frac{5}{4} = 75$ oranges)

27. ($500 - 350 = 150$) ($\frac{150}{500} \times \frac{100}{1} = 30\%$)

28. $\frac{12000 \times 5 \times 8}{100} = \4800 . ($12000 + 4800 = \$16800$)

29. (1 chair = $\frac{1050}{3} = \$350$) (5 chairs = $350 \times 5 = \$1750$) (*A table* = $3500 - 1750 = \$1750$)

30. $\frac{1}{4} \times \frac{450}{1} = \112.50 ($450 - 112.50 = \$337.50$) 31. ($2\frac{1}{4}$ litres = 2250ml) ($\frac{2250}{150} = 15$)

32. $\frac{200 \times 50}{20 \times 10} = 50$ tiles ($50 \times 7 = \$350$) 33. $15000 - (6474 + 4087) = 4439\text{g}$

34. ($6 + 12 + 8 + 8 + 18 + 16$) = 68cm 35. Square – four-right angles

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

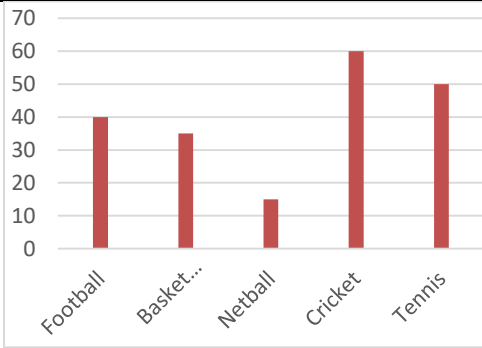


37. Square-Based Pyramid



38. Akeel – Frequency = 4

Renny	### ### ###	
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39.

Plants	Heights in cm
Corn	13
Peas	12
Ochro	15
Pepper	6.5
Cassava	14.5

40.

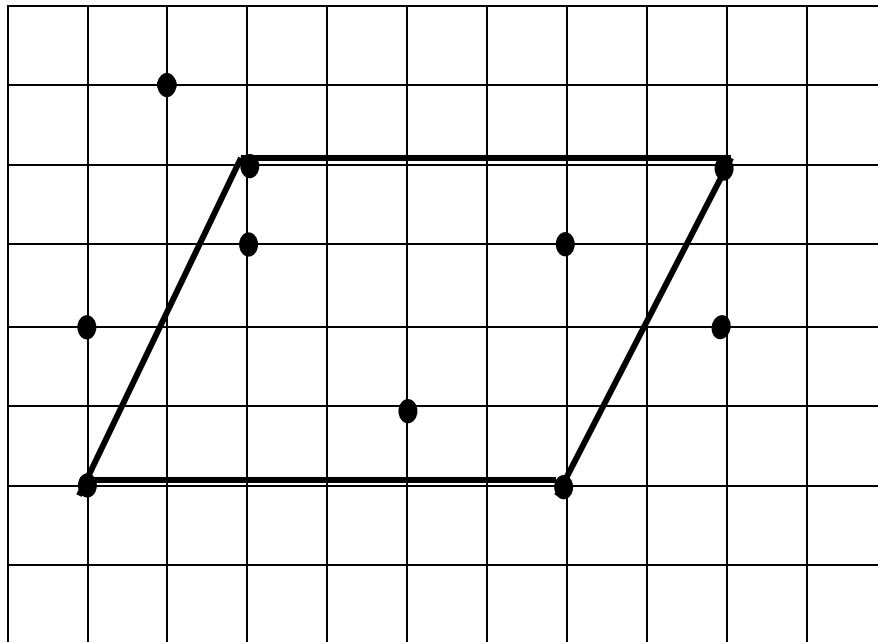
41. $\left(\frac{2}{3} \times \frac{360}{1} = 240\right) \left(\frac{3}{5} \times \frac{240}{1} = 144\right) \left(\frac{144}{6} = 24 \text{ bags}\right)$

42. $(28 \times 4 = 112) (42 \times 3 = 126) (500 - (112 + 126) = 262) (262 \div 2 = 131 \text{ Two-Seaters})$

43. (Route A = $3260 + 2500 + 1700 = 7460\text{m}$) (Route B = 6750m)
 (Route C = $2200 + 2050 + 1035 = 5285\text{m}$)

Kerol should take Route C to get to school. Route C is the shortest of the three routes and by taking Route C, he would get to school faster than the other Routes.

44. (a)

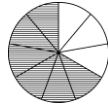


(b) Zero lines of symmetry (c) 2 angles

45. ST. THOMAS PRIMARY SCHOOL has more children living near the school. – More children walk to school which indicates that more children live within walking distance from the school. If children live far from the school, most likely children may not be able to walk to school.

MATHEMATICS TEST THREE – ANSWERS

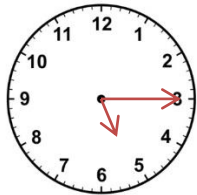
1. five hundred and seven thousand and ninety-two. 2. 6.5 3. >



4. $\frac{90}{100} \times \frac{60}{1} = 54$ 5. $\frac{90}{100} \times \frac{60}{1} = 54$ 6. 5^2 7. $\frac{2}{5} \times \frac{9}{10} = \frac{9}{25}$ 8. $\frac{48}{60} = \frac{4}{5}$
 9. $(3370 - 337 = 3033)$ 10. 25c 11. 14cm 12. $11 \times 11 = 121\text{cm}^2$
 13. $\frac{240}{60} = 4 \text{ hours}$ 14. P of square/rectangle = $15 \times 4 = 60$ ($60 - 10 = 50$)
 $\frac{50}{2} = 25\text{cm}$ 15. Isosceles Triangle

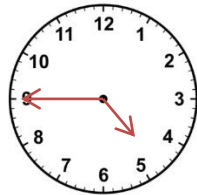
16. cuboid

17. 2 18. $(124 + 286 + 208) \div 3 = \frac{618}{3} = 206$ 19. $\frac{72}{12} = 6 \text{ children}$
 20. $46 - 15 = 31$ at least 21. $(7\frac{1}{2} - 3\frac{7}{10}) (\frac{5}{10} - \frac{7}{10}) (\frac{15}{10} - \frac{7}{10} = \frac{8}{10} = \frac{4}{5}) (6 - 3 = 3) \text{Ans} = 3\frac{4}{5}$
 22. 29.45 23. $(\frac{1}{4} \times \frac{80}{1} = \$20) (\frac{40}{100} \times \frac{80}{1} = \$32) (80 - (32 + 20) = 28) (\frac{1}{2} \times \frac{28}{1} = \$14)$
 24. $\frac{9}{20} \times \frac{100}{1} = 45\%$
 25. Dec = $35 \times 3 = 105$ (Total stamps = $105 + 35 = 140$) ($\frac{105}{140} = \frac{3}{4} = 0.75$)
 26. $(\frac{24}{3} = 8) (5 \times 8 = 40 \text{ cups of water})$ 27. $\frac{3}{20} \times 240 = 36$ ($240 - 36 = 204$) ($\frac{204}{4} = 51 \text{bags}$)
 28. $(47 - 7 = 40) (\frac{2}{5} \times \frac{40}{1} = 16) (16 + 7 = 23 \text{years now})$
 29. (1 man will take $7 \times 6 = 42$ days) (3 men will take $42 \div 3 = 14$)
 30. $(1 \times 2) + (2 \times 5) + (1 \times 8) = 20$ points ($80 - 20 = 60$ points) ($60 \div 10 = 6$ times)
 31. $60 \div (4 \times 3) = 5\text{cm}$ 32. $4.75 + 6.04 = 10.79\text{km}$
 33. Missing height = $4 + 4 + 4 = 12$ Area of parts ($5 \times 12 = 60$) ($7 \times 4 = 28$)
 Total area = $60 + 60 + 28 = 148\text{cm}^2$



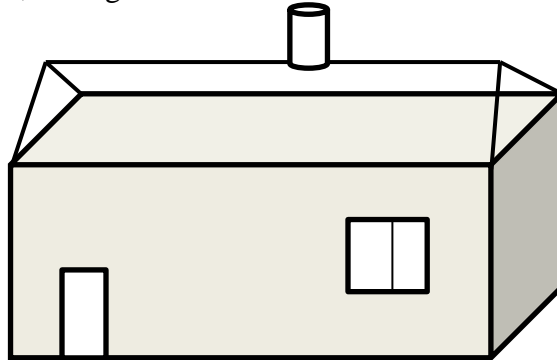
34.

Clock B



Clock C

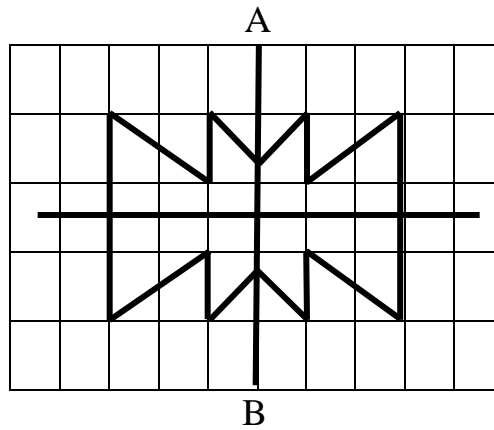
35. Cylinder, Cuboid, Triangular-Base Prism



36.

SHAPES	PROPERTIES OF SHAPES
Shape B	Has only one pair of perpendicular lines and two right angles.
Shape A	A quadrilateral with no right angles and two pairs of parallel lines.

37.



38. $(65 + 72 + 83 + 91 + 54 = 365)$ $(365 \div 5 = 73)$ $(73 + 2 = 75)$ $(75 \times 6 = 450)$ $(450 - 365 = 85)$

39. $(7 + 8 = 15 \text{ students})$

40. Wednesday – No lunches were being served on Wednesday.

41. (a) $(\frac{150}{3} = 50)$ $(50 \times 4 = 200 \text{ pies})$ (b) $50 \times 30 = \$1500$

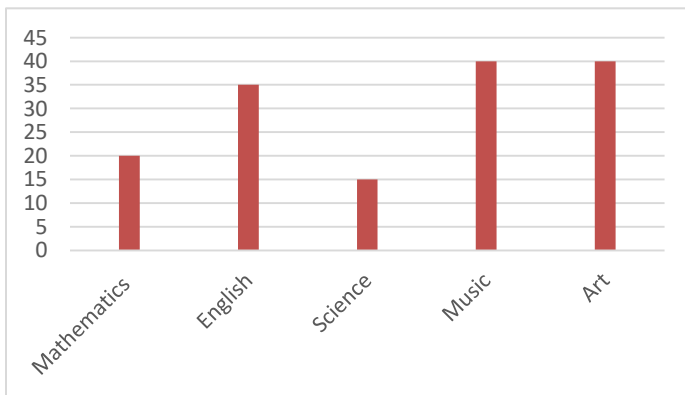
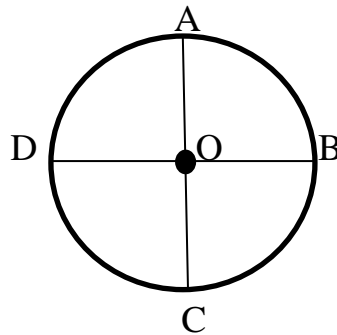
42. $\frac{3}{8} \times \frac{840}{1} = 315 \text{ children}$ $(\frac{2}{3} \times \frac{315}{1} = 210 \text{ males})$ $(\frac{2}{5} \times \frac{210}{1} = 84 \text{ male children})$

43. $(60 \times 100 \times 120 = 720000 \text{ cm}^3 = 720 \text{ litres})$ $(\frac{720}{20} = 36)$ $(36 \times 5 = 180 \text{ mins})$

$\frac{180}{60} = 3 \text{ hours}$

44. (a) 1. A quarter turn in an anticlockwise direction
2. Three-quarter turns in a clockwise direction.

(b)



45.

$150 - (40 + 35 + 15 + 20) = 40 \text{ Art}$

$(35 - 20 = 15)$ $(\frac{15}{150} \times \frac{100}{1} = 10\%)$

MATHEMATICS TEST FOUR – ANSWERS

1. 1265 2. Four hundred and sixty-two thousand and seventy 3. $27 \times 6 = 162$

4. 16.2 5. $\frac{12}{8} = 1\frac{1}{2}$ 6. $\frac{1}{8}, \frac{1}{6}, \frac{1}{3}, \frac{1}{2}$ 7. $40\% \div 2 = 20\%$ 8. $\frac{80}{4} = \$20$



9. $\frac{1}{8} \times \frac{320}{1} = \40 10. $\$17.85 - \$14.97 = \$2.88$ 11. 450cm 12.



13. $\sqrt{121} = 11$ 14. $2\frac{1}{2} l = 2500ml$ ($\frac{2500}{250} = 10$ glasses) 15. 16. 3 – right angles

17. Scalene triangle 18. ~~///~~ ~~///~~ // 19. Cricket 20. $75 - 60 = 15$ children

21. $4\frac{1}{5} \div \frac{7}{10} = \frac{21}{5} \times \frac{10}{7} = \frac{6}{1} = 6$ 22. ($24 \times 4 = 96$) 23. $\frac{45}{3} = 15$ ($10 \times 15 = 150$ cups)

24. $\frac{2}{5} + \frac{3}{10} = \frac{7}{10}$ ($\frac{10}{10} - \frac{7}{10} = \frac{3}{10}$ left) 25. ($2 + 1 + 3 = 6$ poles make one group)
 ($\frac{40}{6} = 6$ groups R 4) ($6 \times 3 = 18$ green + 1 green from the remaining four = 19 green)

26. $\frac{1}{2} \times \frac{750}{1} = 375$ ($\$750 + \$375 = \$1125$) 27. $\frac{8000}{1} \times \frac{5}{100} \times \frac{5}{2} = \1000 ($8000 + 1000 = \$9000$)

28. (a) $\frac{1}{3}$ (b) 35% (c) 0.06 29. 25, 36, 144

30. ($\frac{3}{4}$ of R = 90) ($R = \frac{90}{1} \times \frac{4}{3} = 120$) ($\frac{3}{5}$ of Whole = 120) ($Whole = \frac{120}{1} \times \frac{5}{3} = \200)

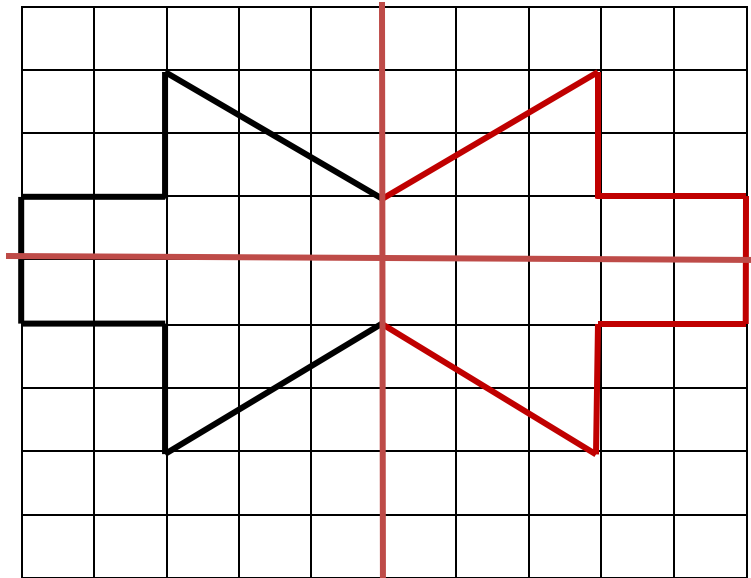
31. ($\frac{9750}{250} = 39$ bags) ($39 \times \$3 = \117) 32. $80000 \div (50 \times 16) = \frac{80000}{800} = 100cm$

33. ($0.75m = 75cm$) ($\frac{75}{15} = 5$) ($5 \times 10 = 50$ beads)

34. (Perimeter of Sq. = $9 \times 4 = 36$) ($36 - (12 + 12) = 12 = 2 \times \text{width}$) (Width = $12 \div 2 = 6cm$)

35. Triangular-Based Prism – This shape will make it easiest for water/objects to run off the roof/ not settle on the roof.

36.



37. a & c

38. $(23 \times 4 = 92)$ $(92 + 33 = 125)$ $(125 \div 5 = 25)$

39. Cats – The most cats were sold. Most people liked cats. The store owner will make more money in his business from selling cats.

40. (One Week $(15 + 10 + 5 + 0 + 10 = \40 saved per week) $(40 \times 3 = \$120)$

41. $\frac{80}{100} \times \frac{300}{1} = 240$ $(\frac{3}{4} \times \frac{240}{1} = 180)$ $(\frac{180}{6} = 30 \text{ tables})$ $(240 - 180 = 60)$
 $(\frac{60}{4} = 15 \text{ tables})$ (Total tables used = $30 + 15 = 45$ tables)

42. $(\frac{1}{2} \times \frac{260}{1} = 130 \text{ marbles})$ $(\frac{60}{100} \times \frac{130}{1} = 78 \text{ marbles})$ $(\frac{2}{3} \times \frac{78}{1} = 52 \text{ marbles})$


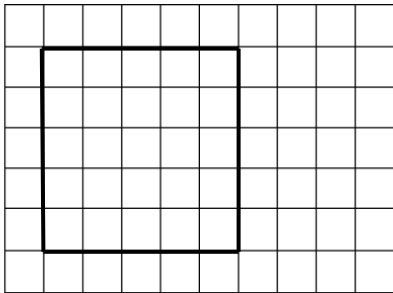
43. $(250 \times 10 = 2500\text{g})$ $(2500\text{g} - 750\text{g} = 1750\text{g} = 1.75\text{kg})$ Nearest Whole = 2kg

44.

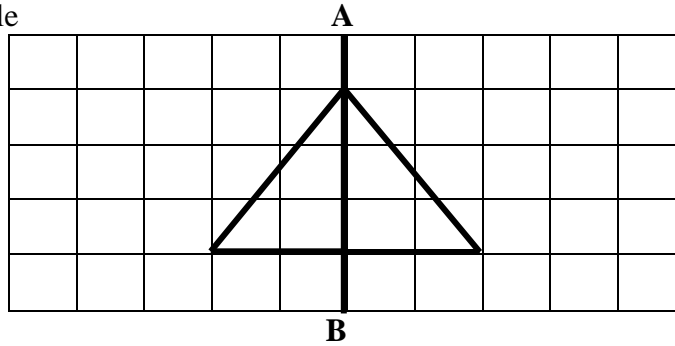
Number of angles less than a right angle	Number of angles greater than a right angle	Number of angles equal to a right angle	Two angles equal to a half turn
<u>3</u>	<u>2</u>	<u>0</u>	(de) (ab)(ad) (cb) (cd) Any one

45. (a) Total = $(76 \times 5 = 380)$ (Spelling = $380 - (65 + 75 + 75 + 95) = 70$)
 (b) $(86 \times 5 = 430)$ $(430 - 380 = 50$ more marks)

MATHEMATICS TEST FIVE – ANSWERS

- 1.** 1 **2.** $\frac{5}{8} \times \frac{40}{1} = 25$ pages **3.** $\frac{45}{100} \times \frac{80}{1} = 36$ **4.** 503.42 **5.** 17
- 6.** $2\frac{1}{2} \times 16 = \frac{5}{2} \times \frac{16}{1} = 40$ km **7.** 92.2 **8.** 7 **9.** 5 **10.** $2014 - 18 = 1996$
- 11.** $(8 + 7) \times 2 = 30$ cm **12.** 3.5 or $3\frac{1}{2}$ **13.**  **14.** $15 \times 15 = 225$ cm² **15.** B
- 16.** equilateral **17.** Cone **18.** Dog **19.** $305 - (64 + 74 + 67) = 100$ ($\frac{100}{2} = 50$)
- 20.** $305 \div 5 = 61$ **21.** $(450 + 35 = 485)$ ($485 \div 25 = 19$ R 10) Reasoning – Ans = 20 maxis.
- 22.** $8\frac{7}{10} - 3\frac{1}{5}$ ($\frac{7}{10} - \frac{2}{10} = \frac{5}{10} = \frac{1}{2}$) ($8 - 3 = 5$) Ans = $5\frac{1}{2}$ **23.** $(52 \times 12 = 624)$ ($624 + 5 = 629$)
- 24.** ($\frac{1}{4} = \frac{2}{8}$) ($\frac{2}{8} + \frac{1}{8} + \frac{3}{8} = \frac{6}{8} = \frac{3}{4}$ spent) ($\frac{1}{4} =$ remainder = \$40) ($Total = \frac{40}{1} \times \frac{4}{1} = \160)
- 25.** ($\frac{2}{5} \times \frac{120}{1} = 48$) ($\frac{3}{4} \times \frac{48}{1} = 36$ fixed) ($\frac{3}{5} \times \frac{120}{1} = 72$ good) ($Total\ good = (72 + 36 = 108)$)
- 26.** ($2\frac{1}{2} + 3\frac{3}{4} + 2\frac{1}{2}$) ($\frac{2}{4} + \frac{3}{4} + \frac{2}{4} = \frac{7}{4} = 1\frac{3}{4}$) ($2 + 3 + 2 = 7$) ($Ans = 7 + 1\frac{3}{4} = 8\frac{3}{4}$)
- 27.** $(13.50 \times 3 = \$40.50)$ ($100.00 - 40.50 = \$59.50$)
- 28.** $\frac{2}{3} = \frac{16}{24} = \frac{4}{6} = \frac{24}{36}$ The answer was found by forming equivalent fractions- by multiplying or dividing the numerator and the denominator by a common number/factor.
- 29.** ($\frac{40}{100} \times \frac{160}{1} = \64 per book.) ($160 - 64 = \$96$ bag) ($96 \times 4 = 384$) ($384 + 64 = \$448$)
- 30.** $(6000 \times \frac{5}{100} \times \frac{2}{1} = \600 interest) ($6000 + 600 = 6600$) ($\frac{6600}{24} = \$275$)
- 31.** Divide shape into two rectangles and find missing sides (16cm and 11cm)
 $(16 \times 8 = 128)$ ($16 \times 11 = 176$) ($128 + 176 = 304$ cm²)
- 32.** 
- The area of the seventh square can be found by multiplying 7 by 7.
- 33.** $(12.4\text{km} + 2.75\text{km} = 15.15\text{km})$ (Approximately 15km to nearest whole km)
- 34.** $(60 \times 10 \times 20) \div (5 \times 5 \times 5) = 96$ cubes **35.** E (East)

36. Isosceles Triangle



37. The number 42 represents the perimeter of the triangle. The triangle is an equilateral triangle. An equilateral triangle has all sides equal. Therefore, $14 \times 3 = 42$.

38. $(13 \text{ faces} \times 20 = 260)$ $(380 - 260 = 120)$ $(120 \div 20 = 6 \text{ faces for Salmon})$

39. (a) $1415 - (257 + 323 + 290 + 265) = 280$ for Wednesday (b) $1415 \div 5 = 283$

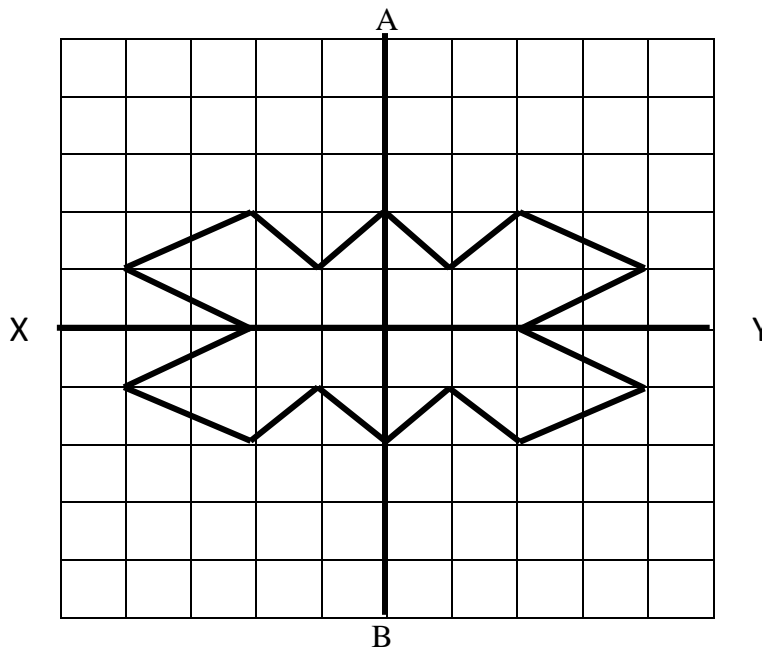
40. $120 - 90 = 30$ children

41. $(12 \times 2 = 24\text{kg corn per bed})$ $(8 \times 6 = 48\text{kg of peas per bed})$ $(24 + 48 = 72\text{kg total per bed})$
 $(72 \times 40 = 2880\text{kg in the truck})$

42. $\frac{45}{100} \times \frac{240}{1} = 108 \text{ children}$ $(\frac{1}{4} \times \frac{108}{1} = 27 \text{ boys})$ $(\frac{2}{3} \times \frac{27}{1} = 18 \text{ boys under nine.})$
 $(27 - 18 = 9 \text{ boys over nine years})$

43. $(15 \times 200 = 3000\text{ml})$ $(5000 - 3000 = 2000\text{ml})$ $(2000\text{ml} \div 250\text{ml} = 8 \text{ glasses})$
 $(15 + 8 = 23 \text{ persons})$

44.

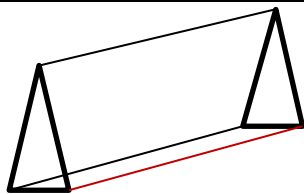


45. Game 1 = 22, Game 2 = 32 Game 3 = 26 Game 4 = 40
 Total points = $22 + 32 + 26 + 40 = 120$ Ans: $\frac{3}{8} \times \frac{120}{1} = 45 \text{ points}$

MATHEMATICS TEST SIX – ANSWERS


1. Four hundred and eight thousand and seven. 2. 3000 or 3-thousands 3. $\frac{5}{100} = \frac{1}{20}$
4. 3 5. $\frac{41}{8}$ 6. 8000 7. 66 8. 8 9. (15 x 7 = 105 buttons)
10. $\frac{300}{5} = 60$ five-dollar bills 11. millilitres 12. $\frac{200}{60} = 3$ hours 20 minutes
13. $(60 - (12 + 12) = 36)$ ($36 \div 2 = 18\text{cm}$) 14. (3kg - 2kg = 1kg) (1kg = 2 halves) Ans = 2
15. Triangular-Based Prism 16. 2 lines 17. Angle B
18. (24 x 2 = 48) (48 - 17 = 31) 19. (6 x 2 = 12 students) 20. (20 - 8 = 12)
21. $3\frac{1}{2} \times 2\frac{2}{3} = \frac{7}{2} \times \frac{8}{3} = \frac{28}{3} = 9\frac{1}{3}$ 22. (600 - 240 = 360) ($\frac{360}{600} \times \frac{100}{1} = 60\%$)
23. ($\frac{45}{5} = 9$) (9 x 2 = 18 days)
24. $\frac{3}{8} = 600$ (Total = $\frac{600}{1} \times \frac{8}{3} = 1600$) ($\frac{40}{100} \times \frac{1600}{1} = 640$) (1600 - 640 = 960 animals)
25. (25 x 23 = 575) (575 - 275 = 300)
26. ($\frac{490}{7} = 70$ shirts) ($\frac{70}{8} = 8$ boxes sealed 6 remainder) Answer = 6 shirts
27. (420 - 347 = 73) (73 + 8 = 81) ($\sqrt{81} = 9$)
28. (2 + 3 = 5) (60 ÷ 5 = 12) (12 x 2 = 24 groups) = 24 x 4 = 96 ribbons
29. (a) 720 + 83 = \$803 (b) 850 + 130 = \$980
30. One shirt will cost less. (Two shirts will be 60% of total cost. Therefore, one shirt will be 30% of the total cost which is less than the 40% for the trousers.)
31. $\frac{3000}{200} = 15$ packets
32. Missing sides = (17 + 16 = 33) + (29 - 16 = 13)
Distance around = (33 + 17 + 16 + 16 + 13 + 29 = 124m) Twice = 124 x 2 = 248m
33. 8:05am - 6:15am = 1hour 50mins
34. (60 x 30 x 20 = 36000cm³) (36000 ÷ 1000 = 36) ($\frac{3}{4} \times \frac{36}{1} = 27$ litres)
35. 2 lines of symmetry 36. Right-Angle & Isosceles
- 37.

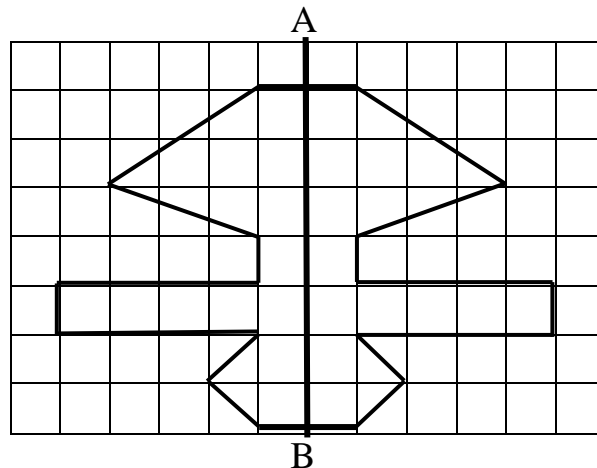
SOLID	NUMBER OF EDGES	NUMBER OF VERTICES	NUMBER OF FACES
Triangular-Based Prism	9	6	5



38. (100 - 90 = 10) (35 - 10 = 25) 39. (65 x 5 = 325) (325 - (62 + 73 + 49 + 68) = 73)
40. Shade 7 blocks
41. (950 + 310 = 1260 toys - Factory B) ($\frac{950}{50} = 19$ boxes - Factory A) ($\frac{1260}{60} = 21$ boxes - B)
(21 - 19 = 2 boxes more)
42. ($\frac{1}{5} \times \frac{2400}{1} = 480$) (2400 - 480 = \$1920 - Store A) ($\frac{1}{4} \times \frac{2500}{1} = 625$)
(2500 - 625 = \$1875 - Store B) (2400 - 490 = \$1910 - Store C) Store B is cheapest
43. ($\frac{500}{20} \times \frac{400}{20} = 500$ tiles) (500 x \$9 = \$4500) 44. (a) NE (b) SW
45. Birds = (150 - (45 + 38 + 2 + 29) = 36) Snakes are least liked and are most likely to be the least purchased animal by children for pets. Snakes will be kept a longer time at the pet shop since they are the least liked by children and children may not want to take them home.

MATHEMATICS TEST SEVEN - ANSWERS

- 1.** 6125 **2.** $\frac{1}{10}$ **3.** $\frac{1}{4}$ **4.** $\frac{2}{5} \times \frac{20}{1} = 8$ blocks. Shade any 8 blocks. **5.** 4
6. 69.36 **7.** $\frac{7}{14}$ **8.** $\frac{12}{16} = 75\%$ **9.** \$122.46 **10.** $\frac{14}{4} = 3\frac{1}{2}$ apples **11.** 3090grams
12. $\frac{9}{3} = 3$ five minutes = 15 mins. (9:30 + 15 = 9:45am) **13.** $\frac{150}{5} = 30$ pieces
14. $5200 - 3748 = 1452$ **15.**  **16.** Smaller than a right angle **17.** Isosceles
18. $(19 + 7 + 14 + 11 + 14 = 65)$ $(65 \div 5 = 13)$ **19.** $(25 - 8 = 17)$ **20.** $(64 - 32 = 32)$
21. $(54 - 9 = 45)$ $(45 \div 3 = 15)$ **22.** $(\$60 \times 5 = 300)$ $(\frac{10}{100} \times \frac{300}{1} = \$30)$ $(300 - 30 = \$270.)$
23. $(7 - 3 = 4\text{m for each time})$ $(4 \times 4 \text{ times} = 16\text{m})$ $(30\text{m} - 16\text{m} = 14\text{m remaining})$
24. $(6\frac{1}{4} - 3\frac{5}{8} \rightarrow \text{Subtract fraction part } (\frac{2}{8} - \frac{5}{8})$ Take one whole from 6 $(\frac{10}{8} - \frac{5}{8} = \frac{5}{8})$
 (Take Whole Numbers - $(5 - 3 = 2)$ Answer = $(2\frac{5}{8})$)
25. $(3.95 \times 2 = \$7.90)$ $(7.90 + 5.50 = \$13.40)$ $(\$20.00 - 13.40 = \$6.60)$
26. $(\frac{7}{1} \div 4\frac{2}{3} = \frac{7}{1} \times \frac{3}{14} = \frac{3}{2} = 1\frac{1}{2})$ **27.** $(12.45 - 4.95 = \$7.50 \text{ for 3 pens})$
 $(7.50 \div 3 = \$2.50 \text{ per pen})$ $(2\text{pens} = 2.50 \times 2 = 5.00)$ $(3 \text{ books} = 4.95 \times 3 = \$14.85)$
 $(14.85 + 5.00 = \$19.85)$
28. $(\text{Mon} - \text{Fri} = 30 \times 8 \times 5 = \$1200)$ $(1\frac{1}{2} \times 30 = \$45.)$ $(45 \times 4 = \$180)$
 $(1200 + 180 = \$1380)$
29. $(\frac{90}{100} \times 1200 = \$1080)$ $(\frac{1}{8} \times 1080 = \$135)$ $(1080 + 135 = \$1115)$
30. $(124 - 64 = 60)$ $(60 \div 3 = 20)$ $(20 \times 2 = 40)$
31. $(300\text{cm} - 24\text{cm} = 276)$ $276 \div 12\text{cm} = 23 \text{ weeks}$
32. $(10 \times 20 \times 50 = 10000)$ $(2 \times 2 \times 2 = 8)$ $(10000 \div 8 = 1250)$ $(1250 \div 2 = 625)$
33. $(84 \div 4 = 21\text{cm})$
34. $(5.75 \times 5 = 28.75)$ $(28750\text{g} \div 50 = 575\text{g})$
35.



36. (a) Equilateral (b) Scalene

37. (a) Parallel Lines (b) Perpendicular lines

38.

FRUIT	NUMBER BOUGHT	PERCENTAGE OF FRUITS BOUGHT
Guavas	8	20%
Bananas	16	40%
Plums	16	40%
Total	40	100%

39. $(24 \times 3 = 72)$ $(72 \div 4 = 18 \text{ oranges})$

40. Keith should not be selected for the team. He scored the lowest number of runs. He may cause the team's average runs in a game to be low.

41. $(300 \times \$2 = \$600)$ $(45\% = \frac{9}{20})$ $(\frac{9}{20} + \frac{3}{10} = \frac{15}{20} = \frac{3}{4})$ $(\frac{3}{4} \times \frac{300}{1} = 225)$
 $(225 \times 2.50 = \$562.50)$ (**LOSS** = $600 - 562.5 = \$37.50$)

42. $(\frac{189}{3} = 63 \text{ boys})$ $(63 \times 2 = 126 \text{ girls in school})$ $(\frac{126}{9} = 14 \text{ girls in each class})$

43. (Small square = $3 \times 3 = 9\text{cm}^2$) (Rectangle = $6 \times 4.5 = 27\text{cm}^2$) (Difference = $27 - 9 = 18\text{cm}^2$)

44.

NAME OF SHAPE	PROPERTIES
Parallelogram	Two pairs of parallel lines, no right angles
Square	Four equal sides, four right angles
Trapezium	one pair of parallel lines, no right angles
Rhombus	Four equal sides, no right angles

45. $102 + 85 + 87 + 114 + 72 = 460$ $(\frac{460}{5} = 92)$ $(102 + 85 + 87 + 114 = 388)$ $(\frac{388}{4} = 97)$
 $(97 - 92 = 5)$

TEST EIGHT – ANSWERS

1. 4 2. 48 3. $7^2 + 1 = 50$ ($5^2 = 25$) ($25 \times 2 = 50$) ($\square = 2$)

4. $\frac{2}{3}$ 5. ($9.00 - 2.73 = 6.27$) 6. 375 7. 3.1 1.3 0.31 0.13

8. $16 \times 9 = 144$ 9. 132 10. $\frac{12}{8} = 1\frac{4}{8} = 1\frac{1}{2}$ cakes

11.



12. ($2000\text{g} - 1350\text{g} = 650\text{g}$) 13. $6:50 - 6:15 = 35\text{minutes}$ 14. $\frac{3000}{400} = 7\frac{1}{2}$

15. Pyramid 16.  17. 5- quarter turns

18. $(18 + 87 + 61 + 75 + 64 + 85) \div 6 = \frac{390}{6} = 65$ 19. P.Cars

20. ($19 - 13 = 6$ more pencils) 21. $\frac{1}{2} + \frac{3}{4} = \frac{5}{4}$ ($\frac{5}{4} \div 2 = \frac{5}{4} \times \frac{1}{2} = \frac{5}{8}$)

22. ($215 - 56 = 159$) ($159 + 215 = 374$ marbles)

23. ($16 \times 18 = 288$) ($396 - 288 = 108$) ($108 \div 18 = 6$ rows)

24. ($6.30 \div 7 = \$0.90 =$ one pen) ($1\frac{1}{2}$ dozen = $18 \times 0.9 = \$16.20$)

25. ($468 - (25 + 11) = 432$) ($\frac{432}{3} = 144$ female students) ($144 + 25 = 169$ female)

26. ($52 - 18 = 34$) Ans: Any number combination to make 34 except $34 + 0$.
eg: $20 + 14$

27. $\frac{30}{100} \times \frac{450}{1} = \135 ($450 - 135 = \$315$)

28. ($25 \times 5 = \$125$) ($375 - 125 = \250 balance) ($250 \div 25 = 10$ weeks)

29. David's answer is smaller. – David has to share the number into more parts which will make each part smaller.

30. $\frac{8000}{1} \times \frac{7}{100} \times \frac{2}{1} = \1120 ($8000 + 1120 = \$9120$)

31. ($3\text{cm} \times 3\text{cm} = 9\text{cm}^2$) (11 squares inside shape) ($11 \times 9 = 99\text{cm}^2$)

32. ($8:00\text{am to } 1:35\text{pm} = 5\text{hrs } 35\text{mins}$) (6hours for parking) ($6 \times 6 = \36)

33. Missing sides($12 - 4 = 8\text{cm}$) ($15 - 9 = 6\text{cm}$)
Perimeter = ($15 + 12 + 6 + 8 + 9 + 4 = 54\text{cm}$)

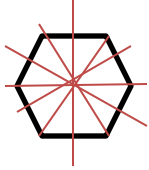
34. ($620\text{cm} - 20 = 600\text{cm}$) ($25 + 15 = 40$) ($600 \div 40 = 15$ bags each)
(Total = $15 \times 2 = 30$ bags)

35. Any quadrilateral(four sided figure)

36.

NAME OF SHAPE	PROPERTIES
Rhombus	No right angles, four equal sides.
Trapezium	Two right angles, one pair of parallel lines.
Square	Four right angles, four equal sides.

37.



38. $4 + 7 + 5 = 16$ children

39. $(52 - 28 = 24)$ $(24 \div 3 = 8 \text{ Blue})$ $(8 \times 2 = 16 \text{ Yellow})$

Blue = 😊 😊 Yellow = 😊 😊 😊 😊

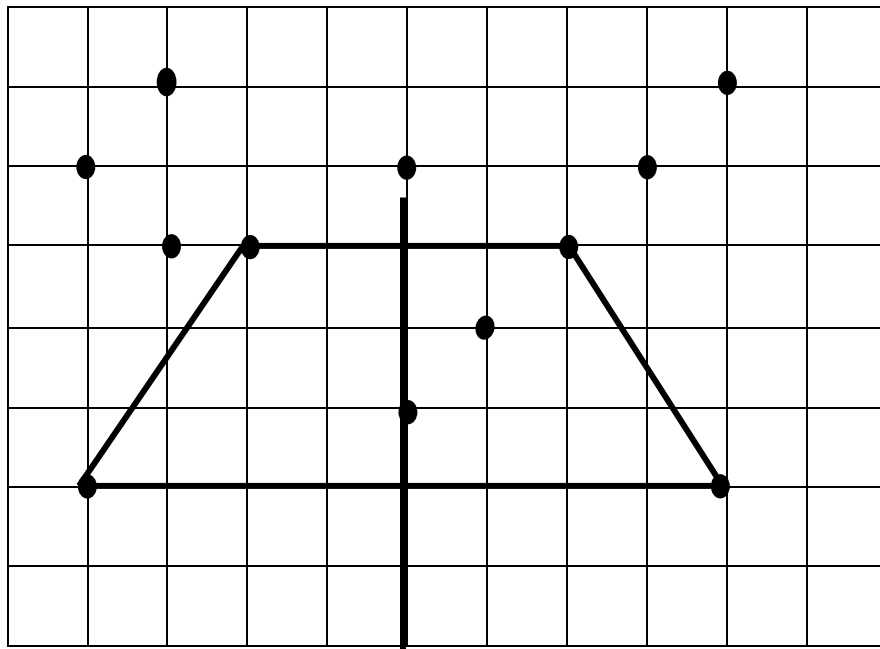
40. Basketball – The least number of children play this sport and it is most likely that the least equipment will be needed and the least amount of damage will be done to equipment.

41. $(\frac{3}{4} \times \frac{2}{5} = \frac{3}{10} \text{ red remaining})$ $(\frac{2}{3} \times \frac{3}{5} = \frac{2}{5} \text{ green remaining})$ $(\frac{3}{10} + \frac{2}{5} = \frac{7}{10})$
 $\frac{7}{10} = 133$ marbles (Whole = $\frac{133}{1} \times \frac{10}{7} = 190$)

42. $(35 \times 5 = \$175)$ $(2011 - 175 = \$1836)$ $(1836 \div 9 = 204)$ $(204 \times 2 = 408 \text{ CD's})$
 $(408 + 35 = 443 \text{ CD's})$

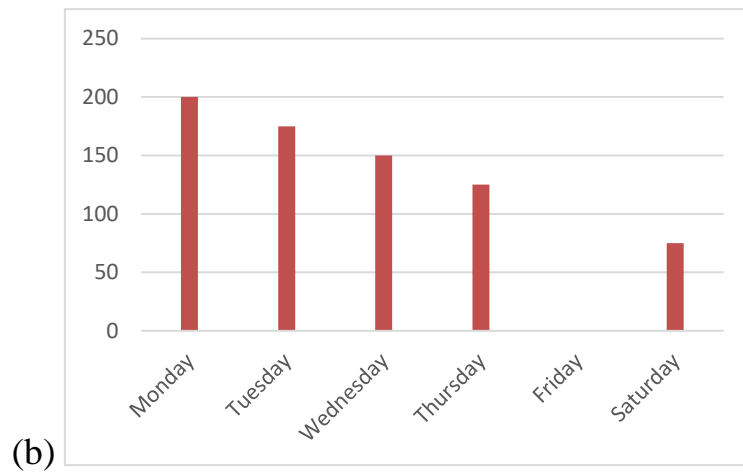
43. $(100 \times 40 \times 30) \div (10 \times 10 \times 10) = 120$ cubes $(100 \times 40 \times 30) \div (20 \times 20 \times 20) = 15$ cubes
 Difference = $120 - 15 = 105$ cubes more in one box.

44.



Line of symmetry

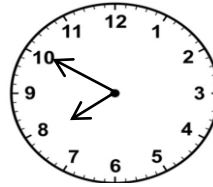
45. (a) 125 cubic metres of gravel.



MATHEMATICS TEST NINE ANSWERS

1. $\frac{4}{10}$ or 4 tenths 2. 300 076 3. $\frac{14}{3}$ 4. $\frac{32}{100} = \frac{8}{25}$ 5. $\frac{18}{30} \times \frac{100}{1} = 60\%$
 6. $8^2 - 35 = 64 - 35 = 29$ 7. $\$8.95 + \$2.30 = \$11.25$ 8. $\frac{20}{100} \times \frac{245}{1} = \49 9. $\frac{2}{8} = \frac{1}{4}$

10. Ben kept $40\% = \frac{40}{100} \times \frac{20}{1} = 8$ marbles 11.

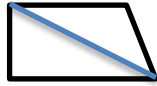


12. kilometre (km) 13. $\frac{450}{10} = 45$ pieces

14. $\frac{56}{4} = 14$ cm

15. Cone

16.



17. <

18. 63 toys

19. Guppy 20. $(45 - 15 = 30)$ children

21. $(\frac{2}{5} + \frac{3}{10} = \frac{4}{10} + \frac{3}{10} = \frac{7}{10})$ $(\frac{10}{10} - \frac{7}{10} = \frac{3}{10})$ saved

22. $(3875 - 287 = 3588)$ ducks $(3875 + 3588 = 7463)$

23. $(17 + 34 = 51)$ m between poles $(18$ poles equal 17 spaces $= 17 \times 51 = 867$ m of cable)

24. $(\frac{32}{1} \div \frac{2}{3} = \frac{32}{1} \times \frac{3}{2} = 48)$ pieces

25.

198

 \times

3

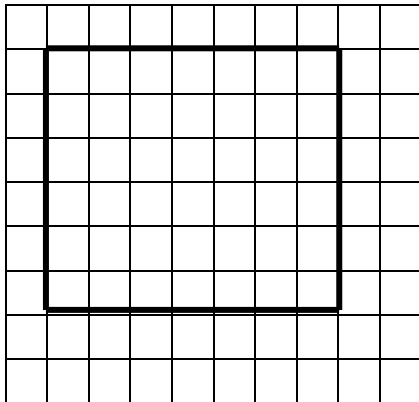
 The 23 was distributed into 20 and 3. 198 - 23 times can be 198 - 20 times added to 198 - 3 times

26. $(24 \times 4 = 96)$ seats $(246 - 96 = 150)$ $(150 \div 6 = 25)$ tables

27. $\frac{1}{8} \times \frac{720}{1} = \90 per week $(90 \div 6 = \$15)$ each day. 28. $\frac{612}{1} \times \frac{5}{2} = 1530$ members

29. VENDOR B - Find the cost of one item for each vendor by dividing the number of oranges by cost of the heap. 30. $\frac{80}{100} \times \frac{400}{1} = 320$ $(320 \times 40 = \$12\ 800)$

31.



32. $(1\text{m} = 100\text{cm})$

$$(V = 100 \times 50 \times 20 = 100000\text{cm}^3)$$

$$\frac{3}{4} \times \frac{100000}{1} = 75000$$

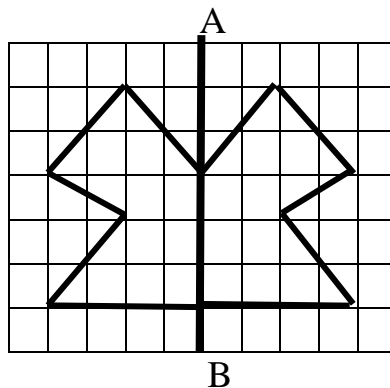
$$(1 \text{ litre} = 1000\text{cm}^3)$$

$$\frac{75000}{1000} = 75 \text{ litres}$$

33. Writing = 65mins Math = 45mins - Difference $(65 - 45 = 20)$ mins

34. 8:15 to 1:30 = 5hrs 15mins. $(6\text{hrs per day} \times \$5 = \$30)$ per day $(30 \times 5 \text{ days} = \$150)$

35.



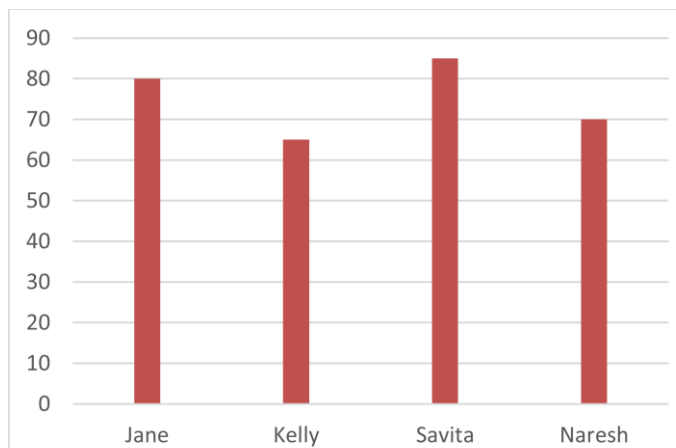
36.

SOLIDS	PROPERTIES
Cube	Six square faces, eight vertices
Cylinder	Two flat faces, one circular surface
Square-Based Pyramid	Five vertices, four triangular faces

37.

ANGLE	LETTERS
Greater than a right angle	A, B, D
Less than a right angle	C, E

38.



39. $240 \div 20 = 12$ 40. $(75 \times 5 = 375)$ $(375 + 87 = 462)$ $(462 \div 6 = 77)$

41. $20\% = \frac{1}{5}$ sold. $(\frac{4}{5}$ remainder) $(\frac{1}{4} \times \frac{4}{5} = \frac{1}{5})$ $(\frac{3}{5}$ remainder) $(\frac{3}{5} = 60)$ $(\frac{60}{1} \times \frac{5}{3} =$
100 oranges in total)

42. $(6000 \times \frac{4}{100} \times \frac{2}{1} = 480)$ $(6000 + 480 = 6480)$ $(2yrs = 24mths)$ $(\frac{6480}{24} = \$270)$

43. (Route A = $2500 + 2500 + 3045 = 8045m$) (Route B = $(3070 + 1750 + 3250 = 8070m)$)
Route B is longer. $(8070 - 8045 = 25m)$

44. (a) Container A (b) The cuboid shape will make it easier to stack **more** containers on each other without toppling over. It will be easier to secure the containers when strapped to the truck.

45. (a) Sports Day (b) Most children will come out to support a sports day (parents and past pupils may also come to increase the number of people present.) (The school can sell more items to more people on the sports day)

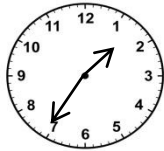
MATHEMATICS TEST TEN - ANSWERS

1. Seven hundred and five thousand and fifty-six. 2. 0.05 3. 7728

4. 50 000 5. $15 \times 30 = 450$ 6. 14, 1.4, 0.41 0.14 7. $5\frac{2}{3}$

8. $150 \times 12 = 1800$ 9. 9 10.
$$25 \overline{) 2825}$$

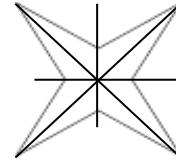
11. $2.36 \times 1000 = 2360$ metres 12. 6cm 13. $\$60.00 - \$53.75 = \$6.25$



14.

15. cylinder

16. 4 lines



17. D 18. 23 19. ~~HHH~~ ~~HHH~~ 1 20. $21 - 9 = 12$

21. $4\frac{7}{8} + 3\frac{1}{2}$ (Add fraction part $(\frac{7}{8} + \frac{1}{2} = \frac{11}{8} = 1\frac{3}{8})$ (Add whole = $(8\frac{3}{8})$)

22. $(532 - 86 = 446)$ $(446 + 532 = 978)$ 23. $\frac{8}{32} = \frac{1}{4} = 0.25$

24. $(60 - 12 = \$48)$ $(48 \div 2 = \$24)$ $(\frac{24}{60} \times \frac{100}{1} = 40\%)$

25. $(16 \times 32 = 512)$ $(512 - 352 = 160)$ $(160 \div 16 = 10$ shelves) 26. 2.37

27. Remainder = $\frac{3}{2} \times \frac{4200}{1} = \6300 $(6300 = \frac{7}{10})$ (Whole = $\frac{10}{7} \times \frac{6300}{1} = \9000)

28. 1 pencil = $\frac{15}{12} = \$1.25$ (7 pencils = $1.25 \times 7 = \$8.75$)

29. $(\frac{25}{100} \times \frac{240}{1} = \$60)$ $(240 + 60 = 300)$ $(300 + 240 = \$540)$

30. By rounding each number given to the nearest 1000, it can be determined that Bill worked for approximately \$7000 while Jane worked for approximately \$6000. Therefore, Bill worked for more money.



31. $1 \text{ kg} = 2$ oranges

1 orange = $\frac{1}{2}$ kg or 500g

32. A small square = $3\text{cm} \times 3\text{cm} = 9\text{cm}^2$

12 squares = $12 \times 9 = 108\text{cm}^2$

33. Missing sides : $(9 + 6 = 15)$ and $(8 - 3 = 5)$

Perimeter = $15 + 8 + 6 + 5 + 9 + 3 = 46\text{cm}$

34. 3 adults = $250 \times 3 = \$750$ per night
 1 night for the family = $\$750 + \$250 = \$1000$

2 children = $125 \times 2 = \$250$ per night
 2 nights for the family = $1000 \times 2 = \$2000$

35.

SOLID	NUMBER OF FACES	NUMBER OF EDGES	NUMBER OF VERTICES
Cube	6	12	8
Cylinder	3	2	0
Triangular-based prism	5	9	6

36. Shape C

37. Triangle B – All the sides are equal.

38. $(16 + 13 = 29)$ $63 - 29 = 34$ $(34 \div 2 = 17)$ Tally = ~~||||~~ ~~||||~~ ~~||||~~ 11

39. $(2500 - (592 + 587 + 345 + 178 + 63 + 127 + 63 + 47)) = 498$ $(498 \div 3 = 166)$
 Sold = $166 \times 2 = 332$ Dumped = 166

40. Robots – most people like robots – robots are selling fastest among the toys.

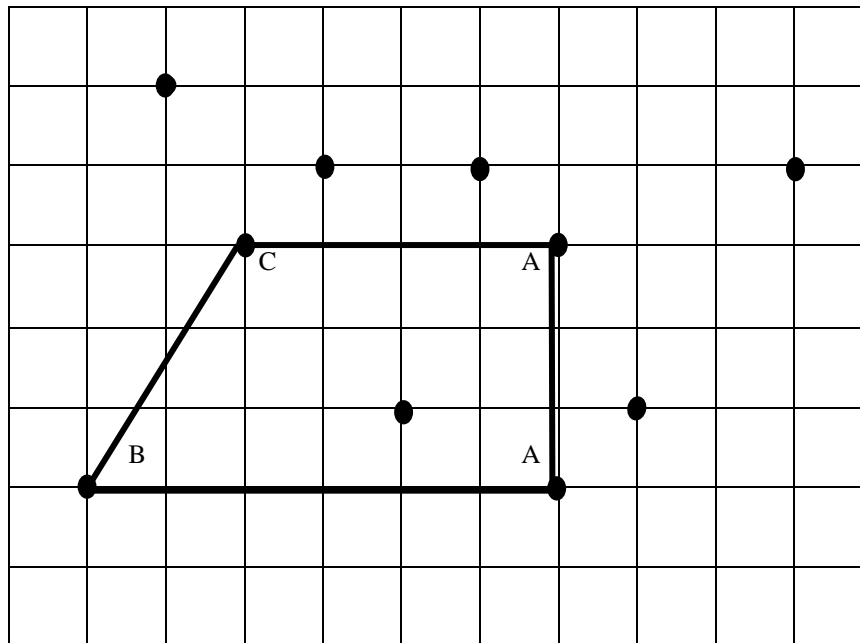
41. $(\frac{10}{100} \times \frac{1200}{1} = \$120)$ $(1200 - 120 = \$1080)$ $(12\frac{1}{2}\% = \frac{1}{8})$ $(\frac{1}{8} \times \frac{1080}{1} = \$135)$

Customer would pay $(1080 + 135 = \$1215.)$

42. $(8623 - 6428 = 2195)$ $(8264 - 6843 = 1421)$ $(1421 + 2195 = 3616)$

43. $((1 \text{ litre} = 1000\text{ml}) (\frac{2}{5} \times \frac{1000}{1} = 400) (5\text{ml} \times 4 = 20\text{ml per day}) (\frac{400}{20} = 20 \text{ days})$

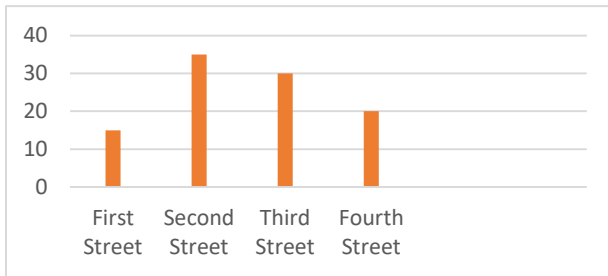
44.



45. The most money should be spent on shirt size 17. Most people in the club are wearing size 17. The most needed shirt size will be size 17.

MATHEMATICS TEST ELEVEN – ANSWERS

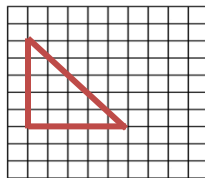
- 1.** 1 025 016 **2.** 42 **3.** 102 **4.** $\frac{8}{12} = \frac{2}{3} = 66\frac{2}{3}\%$ **5.** 1.1 **6.** 9000
7. 25678 **8.** $\frac{4}{10} = \frac{2}{5}$ **9.** $5\frac{7}{9}$ **10.** $128 \times 6 = 768$ pages **11.** cm **12.** 27cm^3
13. 30mins **14.** $80 \times 6 = 480\text{g}$ **15.** AB **16.** Square-Based Pyramid **17.** 5
18. $3 \times 8 = 24$ **19.** 108cm



- 20.**
21.

Common Fraction	Decimal Fraction	Percentage
$\frac{11}{50}$		(a) 22%
	(b) 0.75	75%
(c) $\frac{9}{25}$	0.36	

- 22.** $25 \times 13 = 325$ boxes **23.** $\frac{2}{3}, \frac{11}{12}, \frac{5}{12}$
24. $1635 \times 5 = 8175$ bricks needed ($8175 \div 200 = 40 \text{ R } 175$)
 Ans: The builder has to buy 41 pallets. He will not be able to get an exact number of bricks, therefore he has to buy a full pallet and have some bricks remaining instead of buying one less pallet and not be able to complete one of the houses.
25. $\frac{24}{40} \times \frac{100}{1} = 60\%$ **26.** $\frac{1}{2} \times \frac{60}{1} = \30 ($\$30 = \frac{2}{5}$) ($Zack's \text{ Total} = \frac{30}{1} \times \frac{5}{2} = \75)
27. $\frac{30}{100} \times \frac{4000}{1} = 1200$ children ($\frac{3}{5} = \text{girls}$) ($\frac{3}{5} \times \frac{1200}{1} = 720$ girls)
28. ($35 + 35 + 158 = \$228$) ($500 - 228 = \272) ($272 \div 25 = 10$ hats)
29. $\frac{2}{5} \times \frac{1500}{1} = 600$ ($\frac{1}{10} \times \frac{1500}{1} = 150$) ($1500 - (600 + 150) = 750$ blue marbles)
30. 324 114 **31.** ($250 \times 24 = 6000\text{ml}$) ($6000 \div 1000 = 6$ litres) **32.** $\frac{90}{3} = 30$ ($30 \times 5 = 150\text{mins}$)
33. Route A = ($1500 + 400 + 500 = 2400\text{m}$) Route B = ($900 + 300 + 650 = 1850\text{m}$)
 Ans: Hazel should take Route B – Route B is shorter. She would get to and from the shop faster than if she uses Route A. (Using Route B will save her time)
34. ($1500 \div 250 = 6$) 6th container = Container F - Cost = $6 \times 8 = \$48$



- 35.** East **36.**

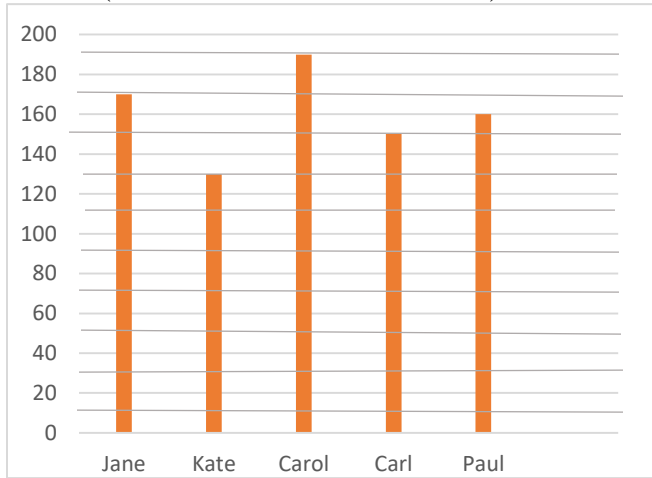
37. (a)

SOLID	NUMBER OF STRAWS USED TO MAKE SOLID
Cuboid	12
Triangular-Based Prism	9

(b) Cuboid

- 38.** ($80 \times 6 = 480$) ($480 - (90 + 74 + 67 + 95) = 154$) ($154 - 4 = 150$) ($150 \div 2 = 75$)
 Two numbers are: 75 and 79

39. Total = $(85 + 72 + 75 + 43 + 65 = 340)$ Mean = $340 \div 5 = 81 =$ Grade A



40.

41. $(10 \times 8 = \$80$ per weekday) (Mon. Wed. Thurs = 13days $\times 80 = \$1040$)(Sat. = $15 \times 8 = \$120$)
 $(120 \times 5 = 600)$ Total = $1040 + 600 = \$1640$

42. $(\frac{25}{100} \times \frac{3200}{1} = \$800)$ $(3200 - 800 = \$2400)$ $(\frac{1}{8} \times \frac{2400}{1} = \$300)$ $(2400 + 300 = \$2700)$

43. A of Garden = $700 \times 700 = 490000\text{cm}^2$ (A of entire space = $1100 \times 1100 = 1210000\text{cm}^2$)
 (A of walk path = $1210000 - 490000 = 720000\text{cm}^2$) (Tiles needed = $\frac{720000}{24 \times 24} = 1250$ tiles)
 $(1250 \times 10 = \$12500)$

44.

Plane Shapes	Number of sides	Number of equal sides	Number of parallel lines	Number of right angles
Parallelogram	4	2 pairs	2 pairs	0
Equilateral Triangle	3	3	0	0
Trapezium	4	0	One pair	0
Square	4	4	2 pairs	4

45. (a) Mathematics (55%) (b) $(55 + 71 + 44 + 60 + 70 = 300)(\frac{300}{450} \times \frac{100}{1} = 66\frac{2}{3}\%)$

TEST TWELVE - ANSWERS

1. 50 407 2. $\frac{19}{5}$ 3. $\frac{30}{1} \times \frac{5}{1} = 150$ 4. 4.4 5. $\frac{20}{100} \times \frac{180}{1} = 36$

6. 9.0 0 7. $45 \div 100 = 0.45$ 8. $\frac{9405}{6} = 1567 \text{ Remainder} = 3$ 9. $49 - 6 = 43$

$$\begin{array}{r} -3.27 \\ \underline{5.73} \end{array}$$

10. $316 + 127 = 443$

11. 1:50

12. Watermelon

13. $\frac{6000}{500} = 12$ 14. $3000 + 55 = 3055\text{m}$ 15. Isosceles Triangle

16. Square based pyramid 17. B 18. $(56 + 23 + 29 = 108) \frac{108}{3} = 36$

19. $(18 + 12 + 38 = 68)$ $(100 - 68 = 32)$ 20. $(15 - 8 = 7)$ 21. 40% 0.5 $\frac{3}{5}$ $\frac{7}{10}$

22. $(60 - 16 = 44)$ $(44 \div 2 = 21)$ $(21 - 16 = 5)$ 23. $(51 - 15 = 36)$ $(36 \div 3 = 12)$ N=12

24. $(25 \times 8 = \$200 \text{ per day})$ $(200 \times 5 = \$1000 \text{ per week})$ $(\frac{10}{100} \times \frac{1000}{1} = 100)$
 $(1000 - 100 = \$900)$

25. $(\frac{12000}{1} \times \frac{5}{100} \times \frac{4}{1} = 2400)$ $(12000 + 2400 = \$14400)$

26. 2-Yellow, 2-Red and 3-Blue 27. $(12\frac{1}{2}\% = \frac{1}{8})$ $(\frac{1}{8} \times \frac{320}{1} = \$40)$ $(320 + 40 = \$360)$

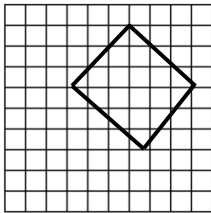
28. $(\frac{1}{4} + \frac{5}{12} = \frac{8}{12} = \frac{2}{3})$ $(\frac{3}{3} - \frac{2}{3} = \frac{1}{3})$ $(\frac{1}{3} \times \frac{600}{1} = \$200)$

29. $(3\frac{1}{2} \times \frac{3}{1} = \frac{7}{2} \times \frac{3}{1} = \frac{21}{2} = 10\frac{1}{2} \text{ km on Tuesday})$ $(10\frac{1}{2} + 3\frac{1}{2} = 14\text{km})$

30. $(148 \times 15 = 2220)$

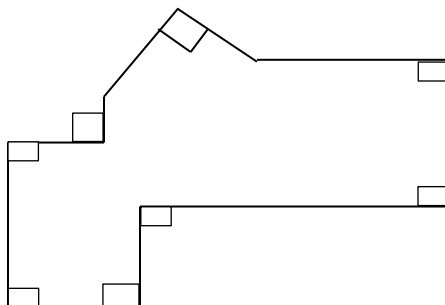
31. He/She can first find the entire area of the backyard by multiplying 12m by 8m then find the area of the pool by multiplying 8m by 4m. The area of the walk path can be found by subtracting the area of the pool from the area of the backyard.

32. 33. $9:15\text{am} - 7:45\text{am} = 1\text{hr } 30\text{mins.}$ $(8:30 - 1:30 = 7:00\text{am})$

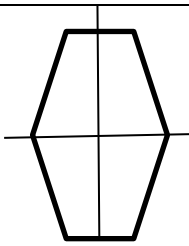


34. Volume = $9\text{cm} \times 9\text{cm} \times 9\text{cm} = 729\text{cm}^3$ 35. $(3700 + 650 + 55 = 4405\text{g})$

36.




37.

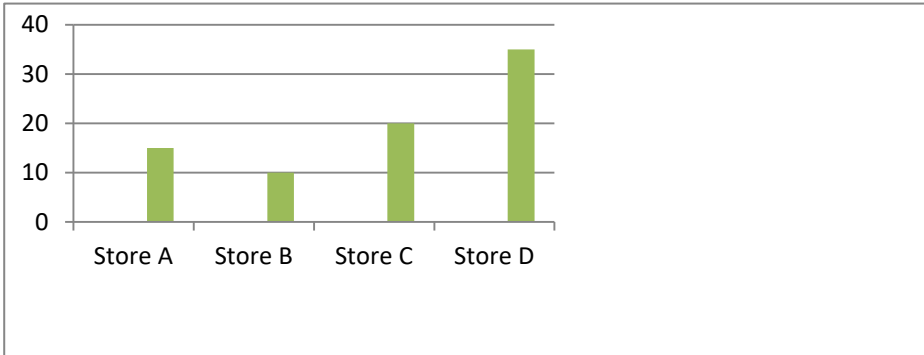


38. $(5 \times 12) + (13 \times 2) + (14 \times 1) \div 8 = 100 \div 8 = 12.5$

39.

Second Year	
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Second Year received the most toys. This class may have more students than the other classes.

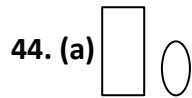


40.

41. $(\frac{30}{100} \times \frac{180}{1} = \$54)$ $(\frac{2}{5} \times \frac{180}{1} = \$72)$ $(180 - (72 + 54) = \$54)$ $(\frac{54}{2} = \$27)$

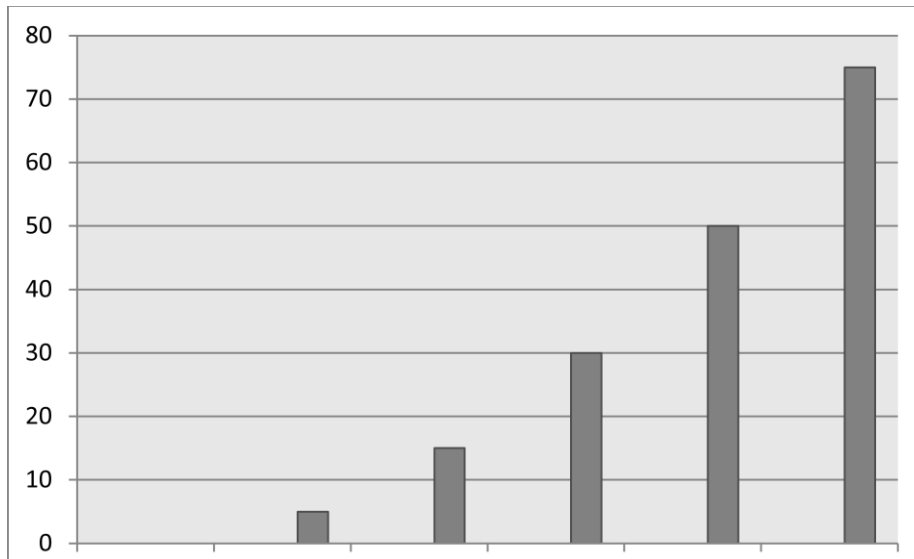
42. $(9836 + 3689 = 13525)$ $(\frac{13525}{5} = 2705)$

43. $(30 \times 20 \times 10 = 6000\text{cm}^3)$ $(\frac{3}{4} \times \frac{6000}{1} = 4500\text{cm}^3)$ (1 litre = 1000cm³)
 $(4500 \div 1000 = 4.5 \text{ litres})$



(b) The pattern is formed by using the solid shape then the flat shapes used to form the solid.

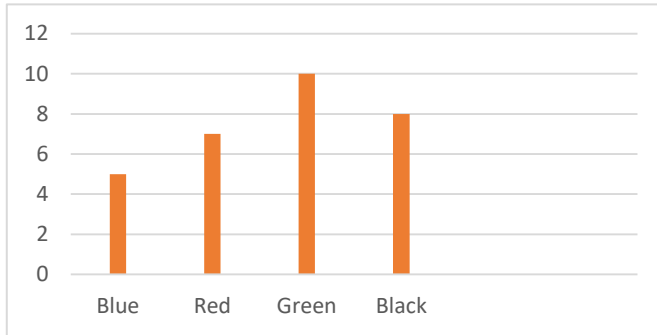
45.



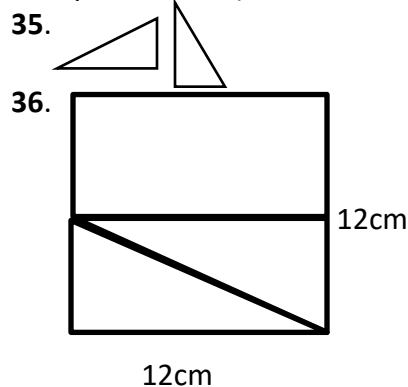
Each day Patsy's **increase in her savings** increased using multiples of '5' starting on Tuesday with 5 and not skipping any multiple. (5, 10, 15, 20, 25)

MATHEMATICS TEST THIRTEEN - ANSWERS

1. 7592 2. 204 3. 340.26 4. 36 5. $\frac{5}{8}$ 6. $7\frac{5}{6}$
 7. $\frac{7}{8} \times \frac{480}{1} = 420$ tickets 8. $(84 - 24) \div 5 = 12$ 9. 7 coins 10. VENDOR A
 11. CONTAINER A 12. $\sqrt{144} = 12$ cm 13. $35 \times 4 = 140$ cm 14. $\frac{270}{60} = 4\frac{1}{2}$ hours
 15. cuboid 16. 0 17. One Whole turn 18. 0
 19. 28



20.
 21. Whole = $\frac{80}{1} \times \frac{5}{2} = 200$ ($\frac{3}{4} \times \frac{200}{1} = 150$)
 22. $\frac{9}{12}$ and $\frac{18}{24}$
 23. Jill applied the distributive law. She knows that 68×55 means the same as $(68 \times 45) + (68 \times 10)$. Therefore, the difference in the answer is 68 ten times.
 24. $(20 \times 16) + 12 = 332$ sweets. ($\frac{332}{12} = 27$ R 8) Remainder would be 8 sweets
 25. $4\frac{1}{5} \div \frac{3}{5} = \frac{21}{5} \times \frac{5}{3} = 7$
 26. $\frac{1}{4} \times \frac{340}{1} = \85 ($340 - 85 = \$255$)
 27. $\frac{45}{3} = 15$ games won (11 games drawn) (Loss = $30 - (15 + 11) = 4$ games)
 28. $\frac{9000}{1} \times \frac{4}{100} \times \frac{3}{1} = 1080$ ($9000 + 1080 = 10080$) ($\frac{3}{4} \times \frac{10080}{1} = \7560)
 29. $(2 + 4 + 8 + 1 = 15)$ ($75 \div 15 = 5$ of each card)
 30. ($\frac{3}{8} \times \frac{160}{1} = 60$) ($0.25 \times 160 = 40$) (Apples = $160 - (60 + 40) = 60$ apples)
 31. $7200 \div (30 \times 12) = \frac{7200}{360} = 20$ cm
 32. $(20 \times 12 = 240\text{m}^2)$ = Area of walk path and swimming pool ($16 \times 8 = 128\text{m}^2$) = A of pool
 ($240 - 128 = 112\text{m}^2$)
 33. Spirit 34. ($1000 \div 4 = 250$) ($250 \div 10 = 25$)



37.

Solid	Number of Faces	Number of Edges	Number of Vertices
Cube	6	12	8
Triangular-Based Prism	5	9	6
Cylinder	3	2	0

38. $\$1500 + 2250 + 1250 = \$ 5000$

39. ~~###~~ ~~###~~ / - Darren ate the least.

40. Tommy – Tommy has the lowest score. By removing the lowest score, the total will remain higher which will result in a higher mean when dividing the total by the number of children.
Mean of four boys = $(84 + 75 + 90 + 71) \div 4 = 320 \div 4 = 80$

41. $(12 \text{ spaces} - \frac{96}{12} = 8 \text{ pipes between two posts})$
 $(8 \times 6m = 48m - \text{distance bet. two posts.})$ (1st and 5th post = 4 spaces)
 $(48 \times 4 = 192m)$

42. $(\frac{1}{3} \times \frac{8400}{1} = 2800)$ $(8400 - 2800 = \$5600)$ $(\frac{1}{8} \times \frac{5600}{1} = 700)$ $(5600 + 700 = \$6300)$
 $(8150 - 6300 = \$1850 \text{ PROFIT})$

43. $\frac{(900 \times 900)}{30 \times 15} = 1800 \text{ tiles}$ $(1800 \times \$12 = \$21600 \text{ for tiles})$ $(21600 + 1250 = \$22850)$

44.

Plane Shape/Solid	Properties
<u>Square</u>	4 right angles, 4 equal sides
<u>Cuboid</u>	12 edges, six faces that are not all equal, eight vertices
<u>Parallelogram</u>	Two pairs of parallel lines, no right angles, opposite sides equal in length. All sides are not equal.
<u>Isosceles Triangle</u>	Three sides, two of which are equal.

45. (a) $\frac{240}{3} = 80$ (b) $85 \times 3 = 255$ $(255 - 240 = 15 \text{ more marks})$

MATHEMATICS TEST FOURTEEN– ANSWERS

1. 6000 2. 49 3. 1008 4. 135 5. $\frac{11}{3}$ 6. $4\frac{2}{5}$ 7. first row
second row

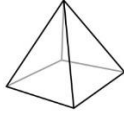
8

2

8. 23 9. \$121.70 10. 6.2 11. 343 12. 6.5cm 13. June 21



14.



15.

16. G

17. L

18. 91

19. Angel

20. 4

21. $(350 - 140 = 210) \left(\frac{210}{350} \times \frac{100}{1} = 60\%\right)$ 22. $(397 \div 24 = 16 \text{ R } 13 \text{ Reasoning} - 17^{\text{th}} \text{ case})$

23. $(\text{Keva} = \frac{45}{1} \times \frac{8}{3} = 120) \text{ Total} = (120 + 45 = 165)$

24. Kevin's drawing is correct. He made equivalent fractions of twentieths. $\frac{3}{10}$ was changed into $\frac{6}{20}$ and $\frac{2}{5}$ was changed into $\frac{8}{20}$.

25.

Item	Quantity	Total Cost
Bag	$190 \div 95 = 2$	$243 - (45+8) = 190$
Glue	$45 \div 15 = 3$	\$45.00
Ruler	2	\$8.00
Total		\$243.00

26. $\frac{16}{1} \div \frac{2}{3} = \frac{16}{1} \times \frac{3}{2} = 24 \text{ bottles}$

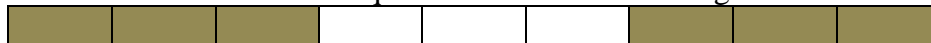
27. Tom can make equivalent fractions and change $\frac{2}{3}$ to $\frac{6}{9}$ then compare the 6 ninths with the 5 ninths and see that 2 thirds is the larger fraction.

Diagram -



5 ninths – five parts shaded

2 thirds shaded which is equal to 6 ninths. 2 thirds is greater



28. Year 1 = 14 Year 2 = 18 (total = $14 + 18 + 23 + 29 + 36 + 44 = 164$)

29. $(100\% - 60\% = 40\%) \left(\frac{35}{100} \times \frac{40}{1} = 14\%\right) (60\% + 14\% = 74\%)$

30. $(15 \times \$4 = \$60) (15 \text{ plums} \div 3 = 5 \text{ groups}) (\$15 \times 5 = \$75) (\text{Profit} = 75 - 60 = \$15)$

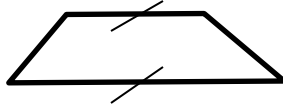
31. $(15\text{cm} = 150\text{mm}) (150\text{mm} - 14\text{mm} = 136\text{mm})$ 32. (Each square = 4cm^2) $(16 \times 4 = 64\text{cm}^2)$

33. (Area of floor = $(10 \times 4) + (4 \times 6) = 64\text{m}^2 = 640000\text{cm}^2$) Tiles needed = $\frac{640000}{1600} = 400$ tiles

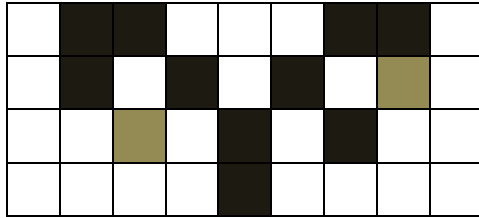
34. $(9 \times 9 \times 9 = 729\text{cm}^3 \text{ needed to fill the box}) (\text{Small cube} = (3 \times 3 \times 3 = 27\text{cm}^3) (27 \times 10 = 270\text{cm}^3)$
(Empty space = $729 - 270 = 459\text{cm}^3$)

35. (a) trapezium

(b)



36.



37.

TURN	BETTY	CANDICE
START	North	North
1	South	<u>West</u>
2	<u>North</u>	South
3	South	<u>East</u>
4	North	North

38. $(55 + 40 + 37 + 62 + 71) \div 5 = 53$ ($53 + 9 = 62$) = Jerry

39. $(58 \times 5 = 290)$ ($60 \times 4 = 240$) ($290 - 240 = 50$ runs)

40. Store B – This store has the highest sales. It is able to attract more people to buy toys and will have a greater chance of selling more of Mr. Mike's toy cars.

41. $(\frac{60}{100} \times \frac{350}{1} = 210 \text{ large})$ ($210 \times \$3 = \630) ($350 - 210 = 140 \text{ small}$) ($\frac{80}{100} \times \frac{140}{1} = 112$)
 $(112 \times 2 = \$224)$ (Total $630 + 224 = \$854$) (Profit = $854 - 700 = \$154$ PROFIT)

42. $(12 \times 2 = \$24)$ ($144 - 24 = \$120$) ($120 \div (6+2) = 15$ pencils/15 sharpeners)
 Total pencils = $15 + 12 = 27$ pencils

43. $(25\text{cm} \times 4 = 100\text{cm} = 1\text{m for four post})$ ($16\text{m} - 1\text{m} = 15\text{m for three spaces}$)
 $(\frac{15}{3} = 5\text{m} = 1 \text{ space})$ (2^{nd} to 10^{th} post means 9 post = $25\text{cm} \times 9 = 225\text{cm} = 2.25\text{m}$) + (8 spaces
 $8 \times 5 = 40\text{m}) = 2.25\text{m} + 40\text{m} = 42.25\text{m}$

44. $(200 \times 50 \times 30 = 300000\text{cm}^3)$ ($\frac{80}{100} \times \frac{300000}{1} = 240000$) ($\frac{5}{2} \times \frac{240000}{1} = 600000\text{cm}^3$)
 $(600000 \div 1000 = 600 \text{ litres})$

45. $(420 + 227 + 364) \div 3 = 337$ (Brenda gives $420 - 337 = \$83$) (Dennis gives $364 - 337 = \$27$)