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.** $\frac{3000}{6} = 500\,g$ **13.** Wednesday

14. 9 x 3 = 27 cm^3

15. Parallelogram

16.
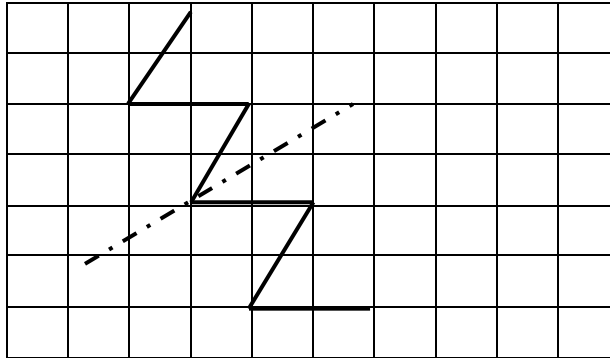
17. C – triangular base prism   **18.** 58 x 5 = 290   **19.** 32   **20.** 4 x 6 = 24

21. 25 and 23   **22.** 8 poles = 7 spaces (9.5 x 7 = 66.5m)

23. $\left(\frac{240}{6} = 40\ tables\right) (40 \times 5 = 200 chairs)(200 - 17 = 183)(\frac{183}{3} = 61$ 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. 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.
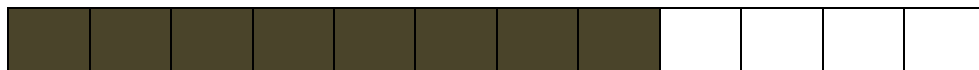
27. (24 + 9 = 33) (33 x 7 = 231)   **28.** $(0.25 = \frac{25}{100} = 25\%$ or $\frac{1}{4}) (\frac{3}{4} = 75\%)$ Therefore, both answers are correct since both answers will result in one whole.
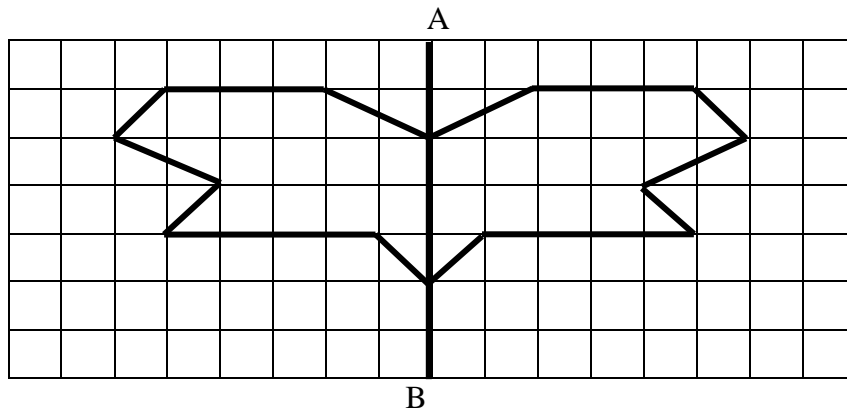(Any diagram to show 3 parts and 1 part to make one whole.)

29. 58 – (18 x 2) = 22 ($width = \frac{22}{2} = 11cm$) Area = 18 x 11 = 198
30. (800cm – 465cm = 335cm or 3m 35cm)
31. Using reasoning - $\frac{3}{4}$ remained ($\frac{3}{4} \times \frac{2000ml}{1} = 1500ml\ or\ 1.5l$
32. (800 x 600) ÷ (40 x 20) = 600tiles (600 x 12 = $7200)

33.

A

B

34. 6 right angles

35. $(60 + 35 + 55) ÷ 3 = 50$ $(50 \times 2 = 100)$ $(100 – 84 = 16)$

36. 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.
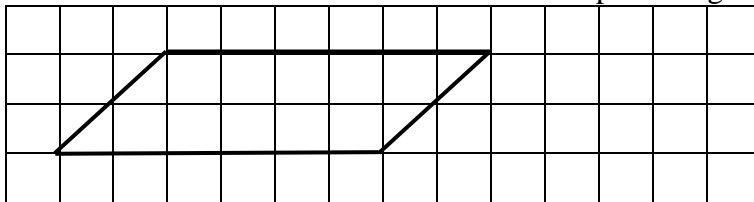
37.a. $(7.5 \times 4 = 30\text{kg})$ $(\frac{30}{5} = 6\text{kg per pack})$ **b.** $(180 \times 4 = 720)$

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

38. (a) $25 \times 2 = 50$ minutes for one day. $(50 \times 4 = 200\text{minutes for 4 days})$ $(200 + (25\text{mins for}$ Thursday evening$) = 225\text{minutes}$ or 2hours 45minutes or $2\frac{3}{4}\ hrs$

(b) $1250 \times 9 = 11250\text{m} = 11\text{km } 250\text{m}$ or 11.25km

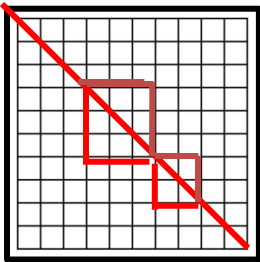**39. a.**   **b.** parallelogram
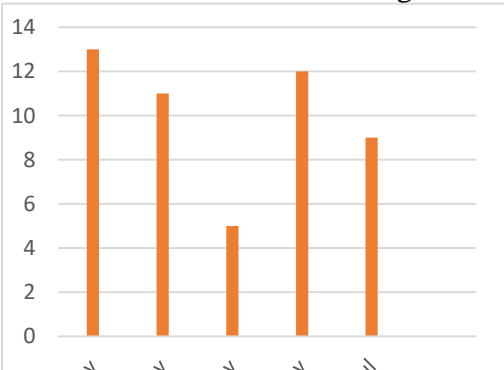

40. (Total stamps collected $= 30 \times 5 = 150$) $(8 \times 1) + (7 \times 4) + (6 \times 3) + (5 \times 8) = 8 + 28 + 18 + 40 = 94$) ($150 – 94 = 56$) ($56 ÷ 4 = 14$ stamps)

MATHEMATICS TEST TWO – ANSWERS

1. Eight hundred and seven thousand and three.   **2.** 5.22   **3.** 1374   **4.** 4   **5.** $\frac{15}{4}$

6. $\frac{1}{4} \ x \ \frac{80}{1} = 20$ **7.** 32 x 5 = 160   **8.** 100   **9.** 0.08   **10.** 3   **11.** 4.83kg

12. 12 x 4 = 48cm^2 **13.** $\frac{1200}{1000} = 1.2 \ litres$ **14.** 6cm – 2cm = 4cm

15.

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

20.

21. $6\frac{5}{6} + 1\frac{2}{3}$ $\left(\frac{5}{6} + \frac{2}{3} = \frac{9}{6} = 1\frac{1}{2}\right) Ans = 8\frac{1}{2}$

22. (8 x 9 = 72) (72 – 4 = 68) (68 ÷ 2 = 34) (34 + 4 = 38years old)

23. 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.

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

25. $\left(\frac{1}{3} \ remainder = 20\right) (Remainder = 20 \ x \ 3 = 60) \left(\frac{4}{5} = 60\right) \left(Total = \frac{60}{1} \ x \frac{5}{4} = 75 \ oranges\right)$

26. (500 – 350 = 150) $\left(\frac{150}{500} \ x \ \frac{100}{1} = 30\%\right)$

27. (1 chair $= \frac{1050}{3} = \$350$) ($5 \ chairs = 350 \ x \ 5 = \$1750$)($A \ table = 3500 - 1750 = \$1750$)

28. $\frac{1}{4} \ x \ \frac{450}{1} = \$112.50$ (450 – 112.50 = \$337.50)   **29.** ($2\frac{1}{4} \ litres = 2250ml$)($\frac{2250}{150} = 15$)

30. $\frac{200 \ x \ 50}{20 \ x \ 10} = 50 \ tiles$ (50 x 7 = \$350)   **31.** 15000 – (6474 + 4087) = 4439g

32. C = 50, B 14, A = 85

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

34. Square-Based Pyramid

35.   **Akeel – Frequency = 4**

Renny	ℋℋ ℋℋ ℋℋ	

36.
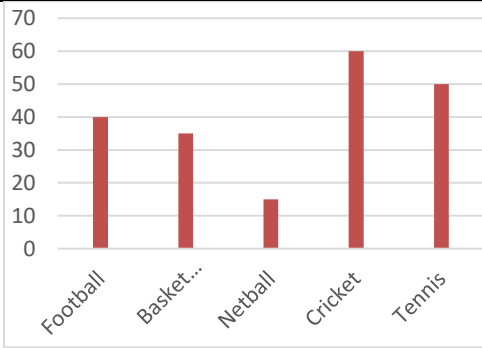
37. (28 x 4 = 112) (42 x 3 = 126) (500 – (112 + 126) = 262) (262 ÷ 2 =131 Two-Seaters)

38. (Route A = 3260 + 2500 + 1700 = 7460m) (Route B = 6750m)

(Route C = 2200 + 2050 + 1035 = 5285m)

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.

39. (a)
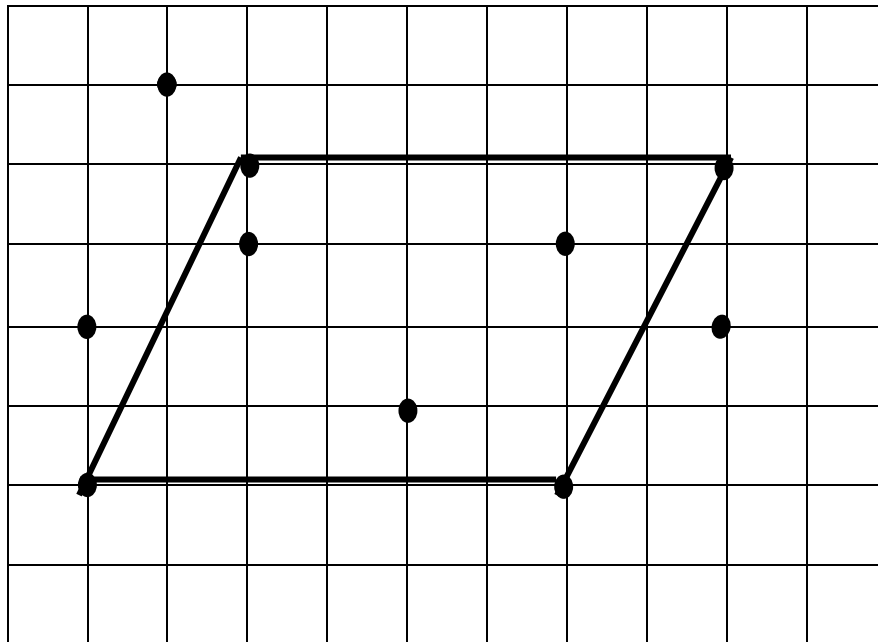
(b) Zero lines of symmetry   (c) 2 angles

40. 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.** >
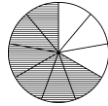
4. $\frac{90}{100}$ x $\frac{60}{1}$ = 54   **5.**   **6.** 5^2 **7.** $\frac{2}{5}$ x $\frac{9}{10}$ = $\frac{9}{25}$ **8.** $\frac{48}{60}$ = $\frac{4}{5}$

9. (3370 – 337 = 3033)   **10.** 25c   **11.** 14cm   **12.** 11x11 = 121cm^2

13. $\frac{240}{60}$ = 4 $hours$ **14.** P of square/rectangle = 15 x 4 = 60 (60 – 10 = 50)

$\frac{50}{2}$ = 25cm   **15.** Isosceles Triangle

16. cuboid

17. 2   **18.** (124 + 286 + 208) ÷ 3 = $\frac{618}{3}$ = 206   **19.** $\frac{72}{12}$ = 6 $children$

20. 46 – 15 = 31 at least   **21.** $\left(7\frac{1}{2} - 3\frac{7}{10}\right)\left(\frac{5}{10} - \frac{7}{10}\right)\left(\frac{15}{10} - \frac{7}{10} = \frac{8}{10} = \frac{4}{5}\right)$(6 – 3 = 3)$Ans$ = 3$\frac{4}{5}$

22. 29.45   **23.** $\left(\frac{1}{4}$ x $\frac{80}{1}$ = \$20\right)\left(\frac{40}{100}x\frac{80}{1}$ = \$32\right)$(80 – (32 + 20) = 28)$(\frac{1}{2}$ x $\frac{28}{1}$ = \$14)

24. $\frac{9}{20}$ x $\frac{100}{1}$ = 45%

25. Dec = 35 x 3 = 105 (Total stamps = 105 + 35= 140) ($\frac{105}{140}$ = $\frac{3}{4}$ = 0.75)

26. $\left(\frac{24}{3} = 8\right)$ (5 x 8 = 40 cups of water)

27. (47 – 7 = 40) ($\frac{2}{5}$ x $\frac{40}{1}$ = 16) (16 + 7 = 23$years$ now)

28. (1 x 2) + (2 x 5) + (1 x 8) = 20 points (80 – 20 = 60 points) (60 ÷ 10 = 6 times)

29. (80 + 80 = 160 = 2 lengths) (160 x 2 = 320 = twice around field) (500 – 320 = 180 = 4
width) 180 ÷ 4 = 45m for width   **30.** 4.75 + 6.04 = 10.79km

31. Mark = 64 cubes. Jenny has 10 cubes. Missing cubes = 64 – 10 = 54 cubes

32.
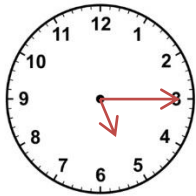
Clock B   **Clock C**
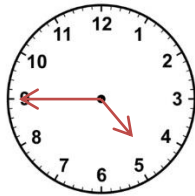
33.

| 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.

34.

A

B
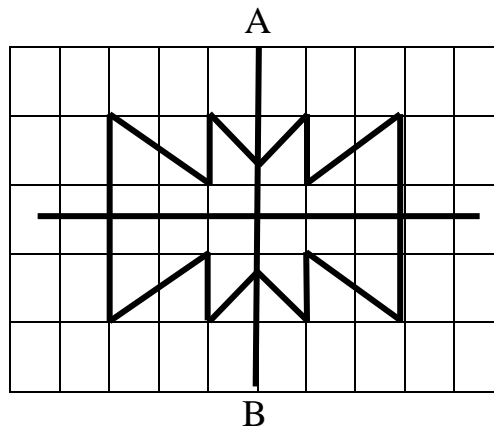
35. $(7 + 8 = 15$ students$)$

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

37. (a) $(\frac{150}{3} = 50)$ $(50 \; x \; 4 = 200 pies)$ $(b)50 \; x \; 30 = \$1500$

38. Distance walked on Tuesday = 948 x 2 =1896, Distance walked on Wednesday =2844m

Total for three days = 948 + 1896 + 2844 = 5688m (Total time = 72 minutes)

Average distance per minute = 5688 ÷ 72 = 79m

39. (a) 1. A quarter turn in an anticlockwise direction

2. Three-quarter turns in a clockwise direction.

(b)
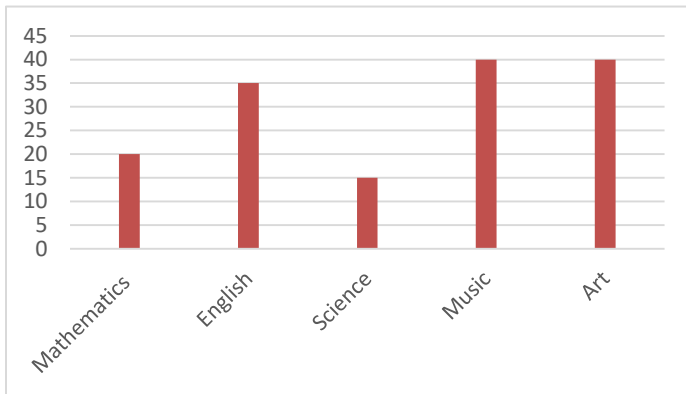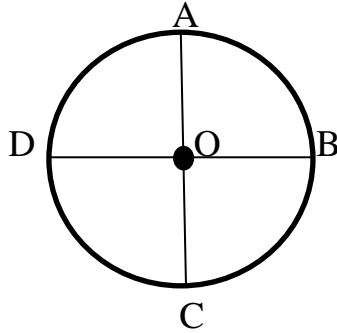
40.

$150 - (40 + 35 + 15 + 20) = 40$ Art

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

MATHEMATICS TEST FOUR – ANSWERS

1. 1265   **2.** Four hundred and sixty-two thousand and seventy   **3.** 27 x 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% ÷ 2 = 20%   **8.** $\frac{80}{4} = \$20$

9. \$320 - \$ 65 = \$ 255   **10.** \$17.85 - \$14.97 = \$2.88   **11.** 450cm   **12.**
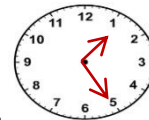
13. $\sqrt{121} = 11$ **14.** $2\frac{1}{2} \; l = 2500ml$ $(\frac{2500}{250} = 10 \; glasses)$ **15.**   **16.** 3 – right angles

17. Scalene triangle   **18.** 𝍫𝍫𝍫 𝍫𝍫𝍫 //   **19.** Cricket   **20.** 75 – 60 = 15 children

21. (24 x 4 = 96)   **22.** $\frac{45}{3} = 15$ $(10\ x\ 15 = 150\ cups)$

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

25. $\frac{1}{2}\ x\ \frac{750}{1} = 375$ ($750 + $375 = $1125)
26. (a) $\frac{1}{3}$ $(b)\ 35\%$ $(c)0.06$ **27.** 25, 36, 144

28. $\left(\frac{3}{4}of\ R = 90\right)\left(R = \frac{90}{1}\ x\ \frac{4}{3} = 120\right)\left(\frac{3}{5}\ 0f\ Whole = 120\right)(Whole = \frac{120}{1}\ x\ \frac{5}{3} = \$200)$

29. $\left(\frac{9750}{250} = 39\ bags\right)(\ 39\ x\ \$3 = \$117)$ 30. 40 + 15 + 35 = 90 mins. 7:15 - 1: 30 = 5: 45 a.m.

31. $((0.75m = 75cm)\left(\frac{75}{15} = 5\ \right)(5\ x\ 10 = 50\ beads)$

32. (Perimeter of Sq. = 9 x 4 = 36) (36 – (12 + 12) = 12 = 2-width) (Width= 12 ÷ 2 = 6cm)

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

34.   a & c   **35**. (23 x 4 = 92) (92 + 33 = 125) (125 ÷ 5 = 25)

36. Cats – The most cats were sold. Most people liked cats. The store owner will make more money in his business from selling cats.
37. $\left(\frac{1}{2}\ x\ \frac{260}{1} = 130\ marbles\right)\left(\frac{60}{100}\ x\ \frac{130}{1} = 78\ marbles\right)\left(\frac{2}{3}\ x\ \frac{78}{1} = 52\ marbles\right)$

38. (250 x 10 = 2500g) (2500g – 750g = 1750g = 1.75kg) Nearest Whole = 2kg

39.

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
_____3_____	____2____	____0____	(de) (ab)(ad) (cb) (cd) Any one

40. (a) Total = (76 x 5 = 380) (Spelling = 380 –(65+ 75 + 75 + 95) = 70)
    (b) (86 x 5 = 430) (430 – 380 = 50 more marks)

MATHEMATICS TEST FIVE – ANSWERS

1. 1   **2.** $\frac{5}{8} \; x \; \frac{40}{1} = 25 \; pages$ **3.** $\frac{45}{100} \; x \; \frac{80}{1} = 36$ **4.** 503.42   **5.** 17

6. $2\frac{1}{2} \; x \; 16 = \frac{5}{2} \; x \; \frac{16}{1} = 40km$ **7.** 92.2   **8.** 7   **9.** 5   **10.** $2014 - 18 = 1996$

11. $(8 + 7) \; x \; 2 = 30cm$ **12.** 3.5 or $3\frac{1}{2}$ **13.**   **14.** $15 \; x \; 15 = 225cm^2$ **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. $8\frac{7}{10} - 3\frac{1}{5} \left(\frac{7}{10} - \frac{2}{10} = \frac{5}{10} = \frac{1}{2}\right) (8 - 3 = 5) Ans = 5\frac{1}{2}$ **23.** $(52 \; x \; 12 = 624) (624 + 5 = 629)$

24. $\left(\frac{1}{4} = \frac{2}{8}\right) \left(\frac{2}{8} + \frac{1}{8} + \frac{3}{8} = \frac{6}{8} = \frac{3}{4} \; spent\right) \left(\frac{1}{4} = remainder = \$40\right) \left(Total = \frac{40}{1} \; x \; \frac{4}{1} = \$160\right)$

25. $\left(\frac{2}{5} \; x \; \frac{120}{1} = 48\right) \left(\frac{3}{4} \; x \; \frac{48}{1} = 36 \; fixed\right) \left(\frac{3}{5} x \frac{120}{1} = 72 \; good\right) (Total \; good = (72 + 36 = 108)$
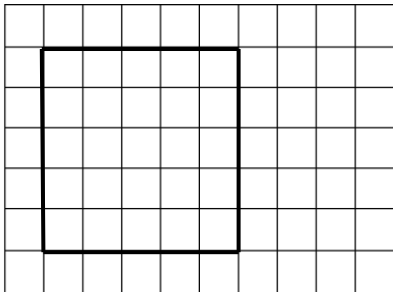
26. $\left(2\frac{1}{2} + 3\frac{3}{4} + 2\frac{1}{2}\right) \left(\frac{2}{4} + \frac{3}{4} + \frac{2}{4} = \frac{7}{4} = 1\frac{3}{4}\right) (2 + 3 + 2 = 7)(Ans = 7 + 1\frac{3}{4} = 8\frac{3}{4})$

27. $\frac{2}{3} = \frac{16}{24} = \frac{4}{6} = \frac{24}{36}$ The answer was found by forming equivalent fractions- by multiplying or dividing the numerator and the denominator by a common number/factor.

28. $(\left(\frac{40}{100} \; x \; \frac{160}{1} = \$64 \; per \; book.\right) (160 - 64 = \$96 \; bag)(96 \; x \; 4 = 384)(384 + 64 = \$448)$

29. (5kg 345g + 2kg 50g = 7kg 395g) (25kg -7kg 395g =17kg 605g)

30.
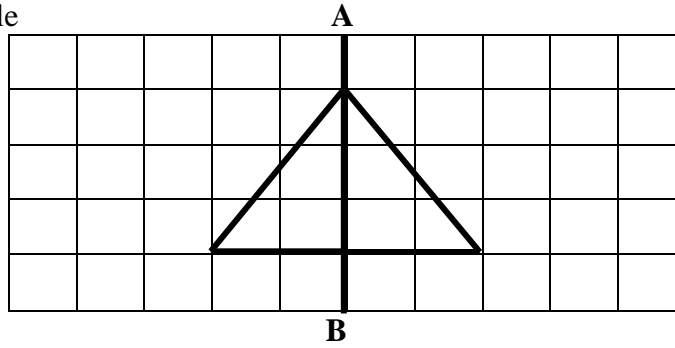

The area of the seventh square can be found by multiplying 7 by 7.

31. (12.4km + 2.75km = 15.15km) (Approximately 15km to nearest whole km)

32. $\frac{80 \times 50}{5 \times 5} = 160$ **33.** E (East)

34. Isosceles Triangle
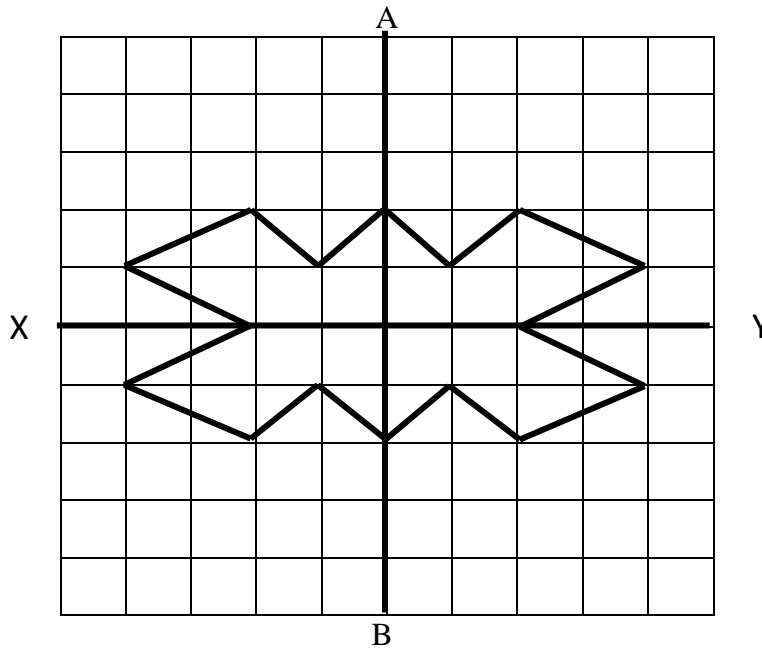
A

B

35. (a) 1415 – (257 + 323 + 290 + 265) = 280 for Wednesday (b) 1415 ÷ 5 = 283

36. 120 – 90 = 30 children

37. (12 x 2 = 24kg corn per bed) (8 x 6 = 48kg of peas per bed) (24 + 48 = 72kg total per bed)
(72 x 40 = 2880kg in the truck)

38. (15 x 200 = 3000ml) (5000 – 3000 = 2000ml) (2000ml ÷ 250ml = 8 glasses)
(15 + 8 = 23 persons)

39.

A

X   Y

B

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

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 ÷ 2 = 18cm) **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. (600 – 240 = 360) ($\frac{360}{600} x \frac{100}{1} = 60\%$)

22. $\left(\frac{45}{5} = 9\right)$ (9 x 2 = 18 days)

23. $\frac{3}{8} = 600$ $\left(Total = \frac{600}{1} x \frac{8}{3} = 1600\right)$ $\left(\frac{40}{100} x \frac{1600}{1} = 640\right)$ (1600 – 640 = 960 animals)

24. (25 x 23 = 575) (575 – 275 = 300)

25. $\left(\frac{490}{7} = 70\ shirts\right)\left(\frac{70}{8} = 8\ boxes\ sealed\ 6\ remainder\right) Answer = 6\ shirts$

26. (2 + 3 = 5) (60 ÷ 5 = 12) (12 x 2 = 24 groups) = 24 x 4 = 96 ribbons

27. (a) 720 + 83 = $803 (b) 850 + 130 = $980

28. 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.)

29. $\frac{3000}{200} = 15\ packets$

30. A = ml B = km C = kg
   Distance around = (33 + 17 + 16 + 16 + 13 + 29 = 124m) Twice = 124 x 2 = 248m

31. 8:05am – 6:15am = 1hour 50mins

32. 28-8=20, (20÷2 = 10m the length of the rectangle) Area of square = 10m x 10 m= 100 square meters
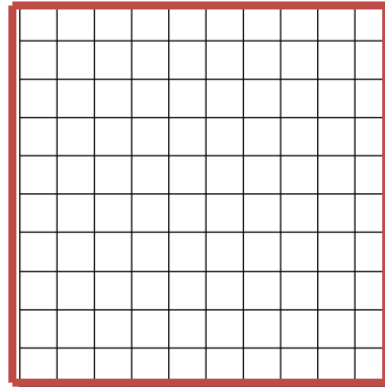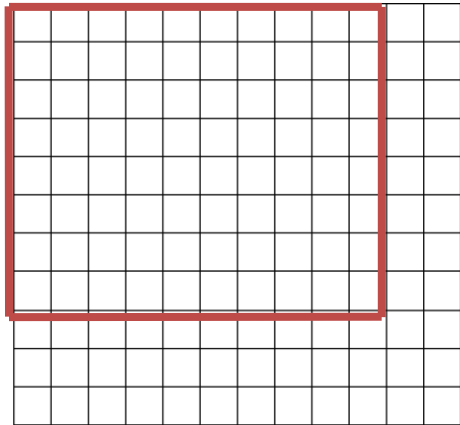
33. 2 lines of symmetry **34**. Right-Angle & Isosceles

35. (65 x 5 = 325) (325 – (62 + 73 + 49 + 68) = 73)

36. Shade 7 blocks

37. ($\frac{1}{5}$ $x \frac{2400}{1} = 480$) (2400 – 480 = $1920 – Store A) $\left(\frac{1}{4}\ x \frac{2500}{1} = 625\right)$
   (2500 – 625 = $1875 – Store B) (2400 – 490 = $1910 – Store C) Store B is cheapest

38. ($\frac{500}{20} x \frac{400}{20} = 500\ tiles$) (500 x $9 = $4500) **39**. (a) NE (b) SW

40. 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.** $\frac{2}{5} \, x \, \frac{20}{1} = 8 \, blocks.$ 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. $\frac{9}{3} = 3 \, five \, minutes = 15 \, mins. \, (9{:}30 + 15 = 9{:}45 am)$ **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 ÷ 5 = 13)   **19.** (25 – 8 = 17)   **20.** (64 – 32 = 32)

21. (54 – 9 = 45) (45 ÷ 3 = 15)   **22.** (\$60 x 5 = 300) $(\frac{10}{100} \, x \, \frac{300}{1} = \$30.$ ($300 - 30 = \$270.$)

23. (7 – 3 = 4m for each time) (4 x 4 times = 16m) (30m – 16m = 14m remaining)

24. $(6\frac{1}{4} - 3\frac{5}{8} \rightarrow$ 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 x 2 = \$7.90) (7.90 + 5.50 = \$13.40) (\$20.00 – 13.40 = \$6.60)

26. (12.45 – 4.95 = \$7.50 for 3 pens)

(7.50÷ 3 = \$2.50 per pen) (2pens = 2.50 x 2 = 5.00) (3 books = 4.95 x 3 = \$14.85)

(14.85 + 5.00 = \$19.85)

27. (Mon – Fri = 30 x 8 x 5 = \$1200) $(1\frac{1}{2} \, x \, 30 = \$45.)$ $(45 \, x \, 4 = \$180)$

(1200 + 180 = \$1380

28. (124 – 64 = 60) (60 ÷ 3 = 20) (20 x 2 = 40)

29. (300cm – 24cm = 276) 276 ÷ 12cm = 23 weeks

30. 8000 – (1450 x 2) = 5100. (5100 ÷3 = 1700) (1700 + 1450 =3150 g or 3kg 150 g)

31. (84 ÷ 4 = 21cm)

32. (5.75 x 5 = 28.75) (28750g ÷ 50 = 575g)

33. (a) Equilateral (b) Scalene   **34.** (a) Parallel Lines (b) Perpendicular lines

35. (24 x 3 = 72) (72 ÷ 4 = 18 oranges)

36. 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.

37. (300 x \$2 = \$600) $\left(45\% = \frac{9}{20}\right) \left(\frac{9}{20} + \frac{3}{10} = \frac{15}{20} = \frac{3}{4}\right) \left(\frac{3}{4} \, x \, \frac{300}{1} = 225\right)$

(225 x 2.50 = \$562.50) (**LOSS** = 600 − 562.5 = \$37.50))

38. Length of rectangle=3x3 = 9 Width of rectangle = 2x3 = 6 . Area of rectangle = 9x 6 = 54 Total area of rectangles = 54 x 2 = 108 . Area of square = 3x3 =9. Total area of squares = 9 x 3 = 27, Total area of shape = 108 + 27 = 135 cm^2

39.

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

40. 102 + 85 + 87 + 114 + 72 = 460) $\left(\frac{460}{5} = 92\right)$ (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 x 9 = 144   **9.** 132   **10.** $\frac{12}{8} = 1\frac{4}{8} = 1\frac{1}{2}$ *cakes*

11.

12. ($2000g - 1350g = 650g$)   **13.** $6{:}50 - 6{:}15 = 35$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. ($6.30 \div 7 = \$0.90 =$ one pen) ($1\frac{1}{2}$ *dozen* $= 18 \times 0.9 = \$16.20$)

24. ($468 - (25 + 11) = 432$) ($\frac{432}{3} = 144$ *female students*) ($144 + 25 =$ 169 *female*)

25. ($52 - 18 = 34$) Ans: Any number combination to make 34 except 34 + 0. eg: 20 + 14

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

27. ($25 \times 5 = \$125$) ($375 - 125 = \$250$ balance) ($250 \div 25 = 10$ weeks)

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

29. ($3cm \times 3cm = 9cm^2$) (11 squares inside shape) ($11 \times 9 = 99cm^2$)

30. (8:00am to 1:35pm = 5hrs 35mins) (6hours for parking) ($6 \times 6 = \$36$) (36x 5)

31. ($25 \times 80 = 2000$ cm) ($2000 \div 100 = 20$ m)

32. ($620cm - 20 = 600cm$) ($25 + 15 = 40$) ($600 \div 40 = 15$ bags each) (Total $= 15 \times 2 = 30$ bags)

33. Any quadrilateral(four sided figure)
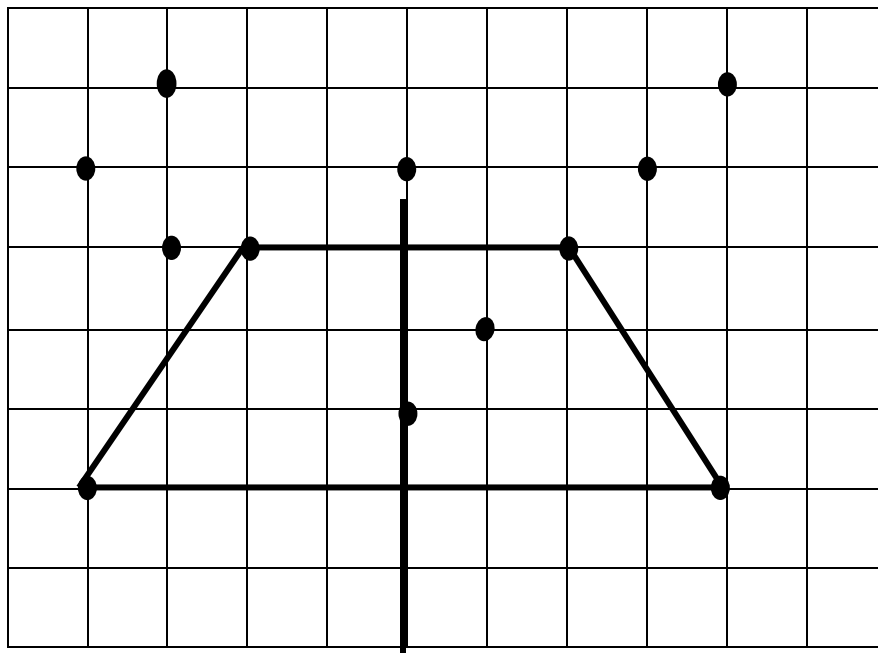
34.

35. 4 + 7 + 5 = 16 children

36. (52 − 28 = 24) (24 ÷ 3 = 8 Blue) (8 x 2 = 16-Yellow)

Blue = ☺ ☺   Yellow = ☺ ☺ ☺ ☺

37. (35 x 5 = $175) (2011 − 175 = $1836) (1836 ÷ 9 = 204) (204 x 2 = 408 CD's) (408 + 35 = 443 CD's)

38. (10000 ÷ 250 = 40) (40 ÷ 12 = 3 remainder 4. (8 bottles needed to fill the case) (250 x 8 = 2000 mls)

39.

Line of symmetry

40. (a) 125 cubic metres of gravel.
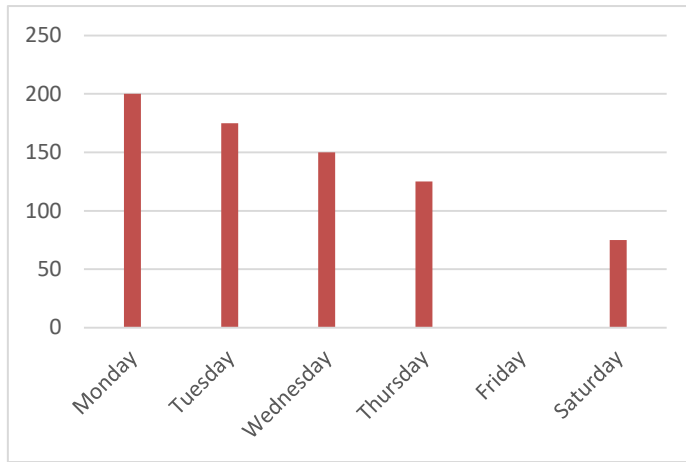
(b)
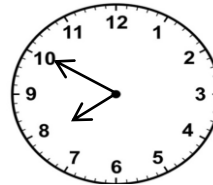
MATHEMATICS TEST NINE ANSWERS

1. $\dfrac{4}{10}$ or 4 tenths **2.** 300 076 **3.** $\dfrac{14}{3}$ **4.** $\dfrac{32}{100} = \dfrac{8}{25}$ **5.** $\dfrac{18}{30}$ x $\dfrac{100}{1} = 60\%$

6. $8^2 - 35 = 64 - 35 = 29$ **7.** $\$8.95 + \$2.30 = \$11.25$ **8.** $\dfrac{20}{100}$ $x \dfrac{245}{1} = \$49$ **9.** $\dfrac{2}{8} = \dfrac{1}{4}$

10. Ben kept $40\% = \dfrac{40}{100}$ $x \dfrac{20}{1} = 8\ marbles$ **11.**

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

14. $\dfrac{56}{4} = 14cm$ **15.** Cone **16.** **17.** $<$ **18.** 63 toys

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

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

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

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

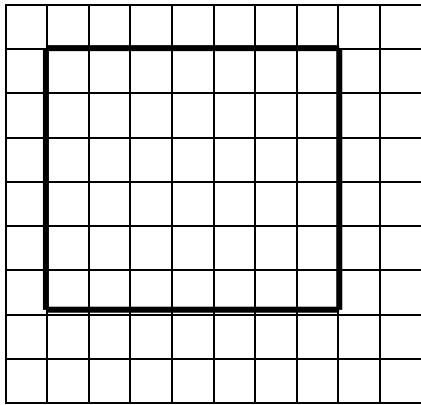**24.** $\boxed{198}$ **x** $\boxed{3}$ The 23 was distributed into 20 and 3. 198 – 23times can be 198 – 20 times added to 198 – 3 times

25. $\dfrac{1}{8}$ $x \dfrac{720}{1} = \$90$ per week $(90 \div 6 = \$15$ each day. **26.** $\dfrac{612}{1}$ $x \dfrac{5}{2} = 1530$ members

27. VENDOR B – Find the cost of one item for each vendor by dividing the number of oranges by cost of the heap. **28.** $\dfrac{80}{100}$ $x \dfrac{400}{1} = 320$ $(320$ x $40 = \$12\ 800)$

29.

30. 100 blocks needed for cuboid.

(100 – 48 = 52)
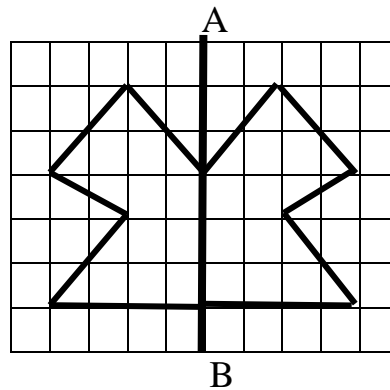
Shape B = 27

Missing blocks = 52 – 27 = 25

31. Writing = 65mins Math = 45mins – Difference (65 – 45 = 20mins)

32. 8:15 to 1:30 = 5hrs 15mins. (6hrs per day x \$5 = \$30 per day) (30 x 5 days = \$150)

33.

A

B

34.

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

35. 240 ÷ 20 = 12   **36.** (75 x 5 = 375) (375 + 87 = 462) (462 ÷ 6 = 77)

37. $20\% = \frac{1}{5} \; sold. \left(\frac{4}{5} \; remainder\right) \left(\frac{1}{4} \; x \frac{4}{5} = \frac{1}{5}\right) \left(\frac{3}{5} \; remainder\right) \left(\frac{3}{5} = 60\right) (\frac{60}{1} x \frac{5}{3} =$

100 oranges in total)

38. (Route A= 2500 + 2500 + 3045 = 8045m) (Route B = (3070 + 1750 + 3250 = 8070m)

Route B is longer. (8070 – 8045 **= 25m)**

39. (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.

40. (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)
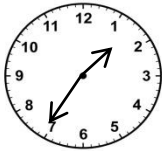
MATHEMATICS TEST TEN - ANSWERS

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

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

8. 150 x 12 = 1800 **9.** 9 **10.**
$$25 \overline{\smash{\big)}\ \begin{array}{ccc} 1 & 1 & 3 \\ 2\ 8 & 2 & 5 \end{array}}$$

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

14. **15.** cylinder **16.** 4 lines
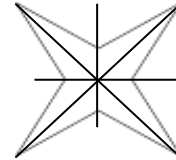
17. D **18.** 23 **19.** 卌 卌 1 **20.** 21 – 9 = 12

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

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

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

25. (16 x 32 = 512) (512 - 352 = 160) (160 ÷ 16 = 10 shelves)

26. 1 pencil $= \frac{15}{12} = \$1.25$ (7 pencils = 1.25 x 7 = $8.75

27. $\left(\frac{25}{100}\ x\ \frac{240}{1} = \$60\right)$ (240 + 60 = 300)(300 + 240 = $540)

28. 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.

29. = 2 oranges **30.** A small square = 3cm x 3cm = 9cm^2
1 orange = ½ kg or 500g 12 squares = 12 x 9 = 108cm^2

31 $(\frac{3}{4} \times 20 = 15)$ $(\frac{2}{3} \times 15 = 10cm)$

32. 3 adults = 250 x 3 = $750 per night 2 children = 125 x 2 = $250 per night
1 night for the family = $750 + $250 = $1000 2 nights for the family = 1000 x 2 = $2000

33.

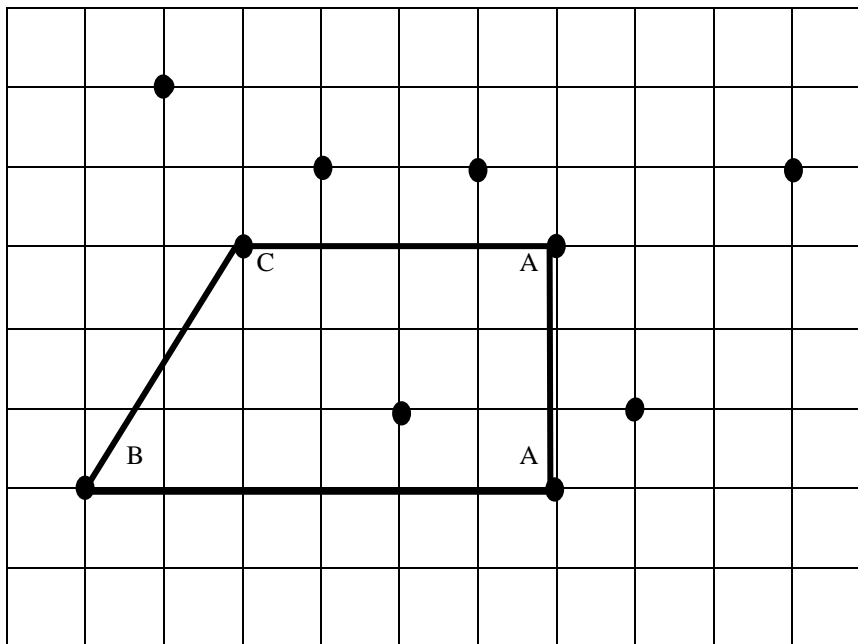| SOLID	NUMBER OF FACES	NUMBER OF EDGES	NUMBER OF VERTICES
Cube	**6**	**12**	**8**
Triangular-based prism	**5**	**9**	**6**

34. Triangle B – All the sides are equal.

35. (16 + 13 = 29) 63 – 29 = 34 (34 ÷ 2 = 17) Tally = ~~||||~~ ~~||||~~ ~~||||~~ 11

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

37. (8623 – 6428 = 2195) (8264 - 6843 = 1421) (1421 + 2195 = 3616)

38. $\left((1\ litre = 1000ml)\ \left(\frac{2}{5}\ x\ \frac{1000}{1} = 400\right)\ (5ml\ x\ 4 = 20ml\ per\ day)(\frac{400}{20} = 20\ days)\right.$
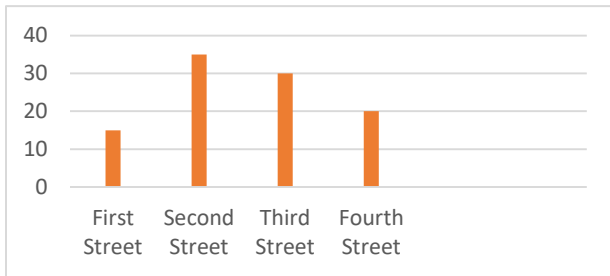
39.

40. 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. 425 016   **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 x 6 = 768 pages   **11.** cm   **12.** 27cm^3

13. 30mins   **14.** 80 x 6 = 480g   **15.** AB   **16.** Square-Based Pyramid   **17.** 5

18. 3 x 8 = 24   **19.** 108cm

20.


	First Street	Second Street	Third Street	Fourth Street

21.

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

22.   25 x 13 = 325 boxes   **23.** $\frac{2}{3}, \frac{11}{12}, \frac{5}{12}$

24. 1635 x 5 = 8175 bricks needed (8175 ÷ 200 = 40 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. $\frac{24}{40} \, x \, \frac{100}{1} = 60\%$ **26.** $\frac{1}{2} \, x \, \frac{60}{1} = \$30 \left(\$30 = \frac{2}{5}\right) (Zack's \ Total = \frac{30}{1} \, x \, \frac{5}{2} = \$75)$

27. (35 + 35 + 158 = $228) (500 – 228 = $272) (272 ÷ 25 = 10 hats)

28. 324 114   **29.** (250 x 24 = 6000ml) (6000 ÷ 1000 = 6 litres)   **30.** $\frac{90}{3} = 30 \ (30 \ x \ 5 = 150 mins)$

31. (1500 ÷ 250 = 6) 6th container = Container F - Cost = 6 x 8 = $48

32. Route A = (1500 + 400 + 500 = 2400m) Route B = (900 + 300 + 650 = 1850m)

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)
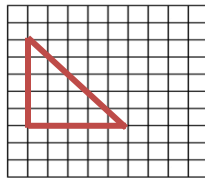
33. East   **34.**

35. Total = (85 + 72 + 75 + 43 + 65 = 340) Mean = 340 ÷ 5 = 81 = Grade A

36.
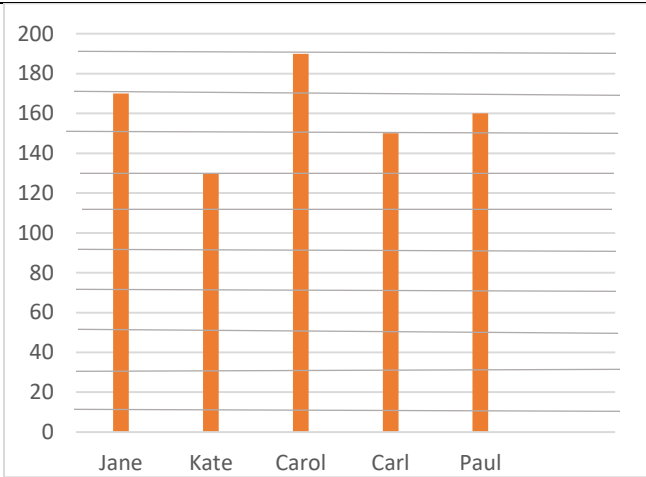
37. (10 x 8 = $80 per weekday) (Mon. Wed. Thurs = 13days x 80 = $1040)(Sat.= 15 x 8 = $120)
(120 x 5 = 600) Total = 1040 + 600 = $1640

38. A of Garden = 700 x 700 = 490000cm^2 (A of entire space = 1100 x 1100 = 1210000cm^2)
(A of walk path = 1210000 – 490000 = 720000cm^2) (Tiles needed $= \frac{720000}{24 \; x \; 24} = 1250 \; tiles$)
(1250 x 10 = $12500)

39.

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

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

TEST TWELVE - ANSWERS

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

6. $\begin{array}{r} 9.00 \\ -\underline{3.27} \\ \underline{5.73} \end{array}$ **7.** $45 \div 100 = 0.45$ **8.** $\frac{9405}{6} = 1567 \; Remainder = 3$ **9.** $49 - 6 = 43$

10. 316 + 127 = 443   **11.** | 1:50 | **12.** Watermelon

13. $\frac{6000}{500} = 12$ **14.** 3000 + 55 = 3055m   **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 ÷ 2 = 21) (21 – 16 = 5)   **23.** (51 – 15 = 36) (36 ÷ 3 = 12) N=12

24. 2-Yellow, 2-Red and 3-Blue   **25.** $\left(12\frac{1}{2}\% = \frac{1}{8}\right) \left(\frac{1}{8} \; x \; \frac{320}{1} = \$40\right) (320 - 40 = \$280)$

26. $\left(\frac{1}{4} \; + \; \frac{5}{12} \; = \; \frac{8}{12} = \frac{2}{3}\right) \left(\frac{3}{3} - \frac{2}{3} = \frac{1}{3}\right) \left(\frac{1}{3} \; x \; \frac{600}{1} = \$200\right)$

27. $\left(3\frac{1}{2} \; x \; \frac{3}{1} \; = \; \frac{7}{2} \; x \; \frac{3}{1} = \frac{21}{2} = 10\frac{1}{2} \, km \; on \; Tuesday\right) (10\frac{1}{2} \; + \; 3\frac{1}{2} = 14km)$
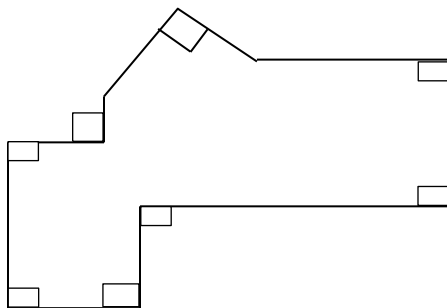
28. (148 x 15 = 2220)

29. 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.

30   **31**. 9:15am – 7:45am = 1hr 30mins. (8:30 – 1:30 = 7:00am)
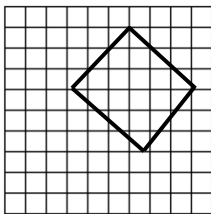
34. Volume = 128 – 64 = 64 cubes

33.

34.
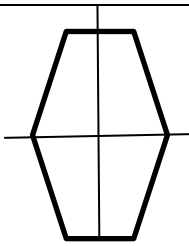
35.

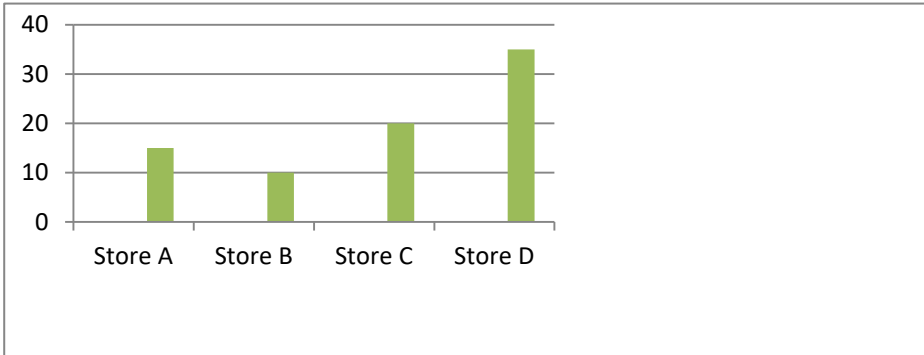| Second Year	🧸 🧸 🧸 🧸 🧸 🧸

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

36.
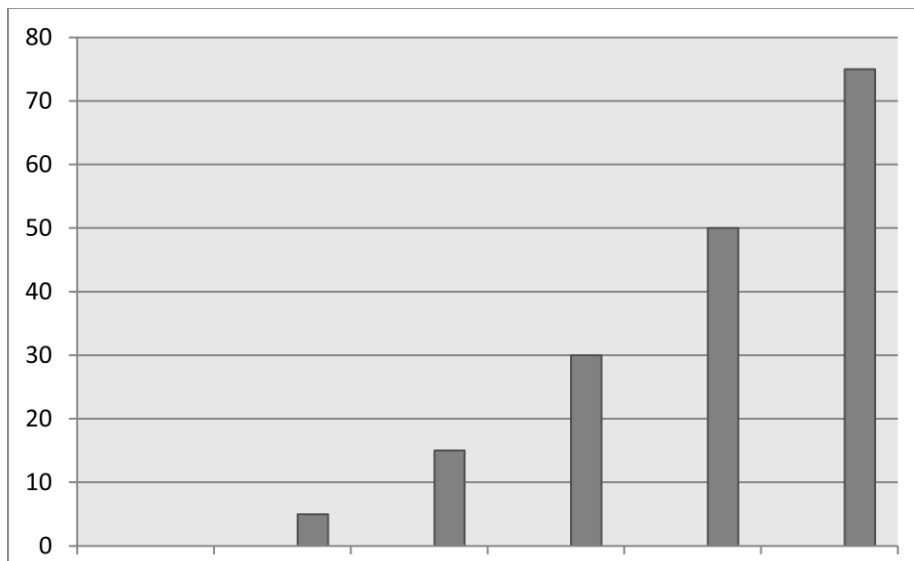
37. $(9836 + 3689 = 13525)(\frac{13525}{5} = 2705)$

38. $(\frac{1}{3} \ x \ 60 = \ 20m \ as \ remainder)$ (20m – 3m35cm = 16m 56cm) (1665 ÷ 5 = 3m33cm)
   (3m33cm x 3 = 9m 99cm)

39. (a) 　　**(b)** The pattern is formed by using the solid shape then the flat shapes used to form the solid.
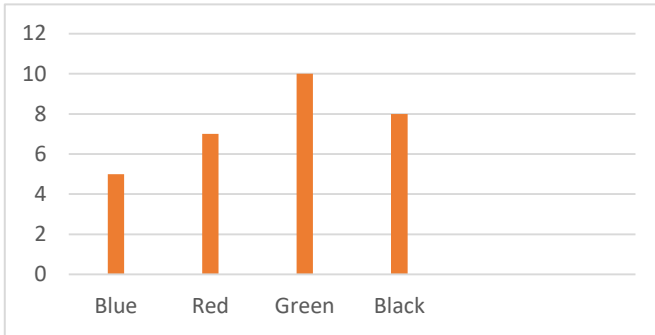
40.

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. $\frac{7}{8} X \frac{480}{1} = 420\ tickets$ **8.** $(84 - 24) \div 5 = 12$ **9.** 7 coins   **10.** VENDOR A

11. CONTAINER A   **12.** $\sqrt{144} = 12cm$ **13.** 35 x 4 = 140cm   **14.** $\frac{270}{60} = 4\frac{1}{2}\ hours$

15. cuboid   **16.** 0   **17.** One Whole turn   **18.** 0

19. 28

20.

21. Whole = $\frac{80}{1} X \frac{5}{2} = 200$ $\left(\frac{3}{4}\ x\ \frac{200}{1} = 150\right)$

22. $\frac{9}{12}$ and $\frac{18}{24}$

23. Jill applied the distributive law. She knows that 68 x 55 means the same as (68 x 45) + (68 x 10). Therefore, the difference in the answer is 68 ten times.

24. (20 x 16) + 12 = 332sweets. $(\frac{332}{12} = 27\ R\ 8)$ $Remainder\ would\ be\ 8\ sweets$

25. $\frac{1}{4}\ x\ \frac{340}{1} = \$85$ $(340 - 85 = \$255)$

26. $\frac{45}{3} = 15\ games\ won$ $(11\ games\ drawn)(Loss = 30 - (15 + 11) = 4\ games)$

27. (2 + 4 + 8 + 1 = 15) (75 ÷ 15 = 5 of each card)

28. $(\frac{3}{8}\ x\ \frac{160}{1} = 60)(0.25\ x\ 160 = 40)(Apples = 160 - (60 + 40) = 60apples)$

29. (21÷2 = 10.5) (10.5 x 10 = 105 mm)

30. (20 x 12 = 240m^2)= Area of walk path and swimming pool (16 x 8 = 128m^2) = A of pool $(240 - 128 = 112m^2)$

31. Spirit   **32.** (1000 ÷ 4 = 250) (250 ÷ 10 = 25)
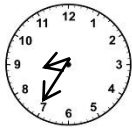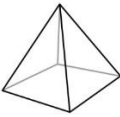
33.

34.

12cm

12cm
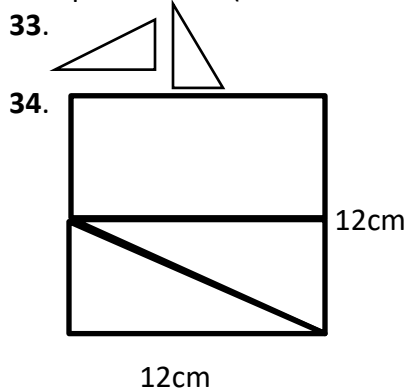
35. ⫻⫻⫻ ⫻⫻⫻ / - Darren ate the least.

36. 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) ÷ 4 = 320 ÷ 4 = 80

37. (12 spaces $-\frac{96}{12} = 8$ *pipes between two posts*
$(8 \times 6m = 48m - distance\ bet.\ two\ posts.)$ (1st and 5th post = 4 spaces)
(48 x 4 = 192m)

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

39.

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

40. (a) $\frac{240}{3} = 80$ (b) 85 x 3 = 255   (255 – 240 = 15 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.** 64 cm^2 **12.** 6.5cm   **13.** June 21

14.   **15.**   **16.** G   **17.** L   **18.** 91   **19.** Angel   **20.** 4

21. (350 – 140 = 210) ($\frac{210}{350} \times \frac{100}{1} = 60\%$)   **22.** (397 ÷ 24 = 16 R 13 Reasoning – 17th case)

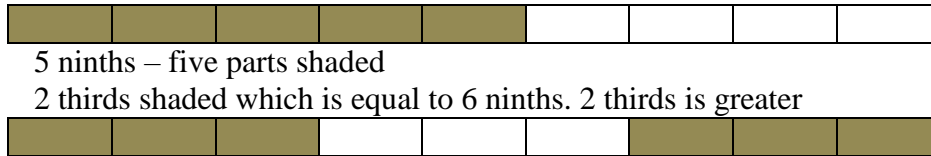**23.** (Keva= $\frac{45}{1} \times \frac{8}{3} = 120$) Total = (120 + 45 = 165)

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. 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

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

28. (15 x $4 = $60) (15 plums ÷ 3 =5groups) ($15 x 5 = $75) (Profit = 75 – 60 = $15)

29. (15cm = 150mm) (150mm – 14mm = 136mm)   **30.** (Each square = 4cm^2) (16 x 4 = 64cm^2)

31. (a) Clock B   (b) 50 minutes

32. (64 needed to fill the box) (Have 10 in box) (Missing 64-10 = 54)

33.
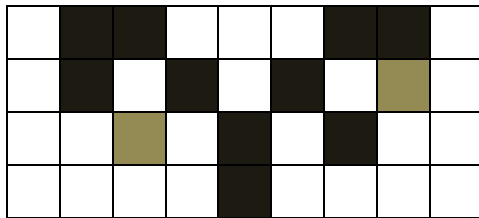
34.

TURN	BETTY	CANDICE
START	North	North
1	South	**West**
2	North	South
3	South	**East**
4	North	North

35. (55 + 40 +37 + 62 + 71) ÷ 5 = 53 (53 + 9 = 62) = Jerry

36. 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.

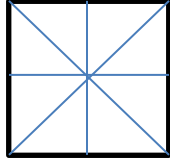**37.** (12 x 2 = $24) (144 – 24 = $120) (120 ÷ (6+2) = 15 pencils/15sharpeners)
Total pencils = 15 + 12 = 27pencils

38. (25cm x 4 = 100cm = 1m for four post) (16m – 1m = 15m for three spaces)
($\frac{15}{3} = 5m$ = 1 space) (2nd to 10th post means 9 post = 25cm x 9 = 225cm = 2.25m) + (8 spaces
8 x 5 = 40m) = 2.25m + 40m = 42.25m

39. (a) Triangles needed = 8

(b) Area = 18cm x 18cm = $324cm^2$

40. (420 + 227 + 364) ÷ 3 = 337) (Brenda gives 420 – 337 = $83) (Dennis gives 364 – 337 =
$27)