MATHEMATICS TEST 1 - ANSWERS

1. 6000   **2.** 49   **3.** 1008   **4.** 135   **5.** $\frac{11}{3}$ **6.** $4\frac{2}{5}$ **7.** first row [8]

second row [2]

8. 23   **9.** $121.70   **10.** 6.2   **11.** <

12. $\frac{3000}{6} = 500g$ **13.** Wednesday   **14.** 9 x 3 = 27 cm^3
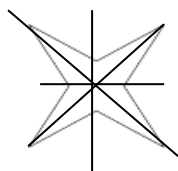
15.   **16.** 3 – right angles   **17.** Scalene triangle

18. 4 fishes   **19.** 7

20.
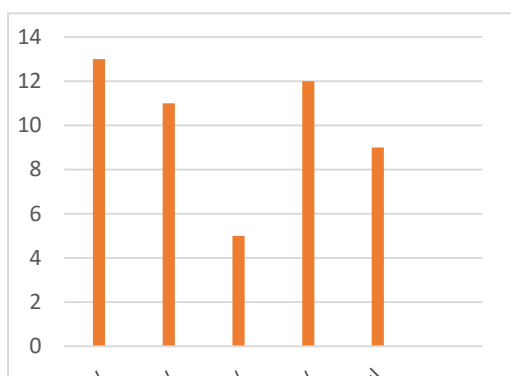
21. Whole = $\frac{80}{1} X \frac{5}{2} = 200$ $\left(\frac{3}{4} \ x \ \frac{200}{1} = 150\right)$

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. ($\frac{332}{12} = 27 \ R \ 8$) $Remainder \ would \ be \ 8 \ sweets$
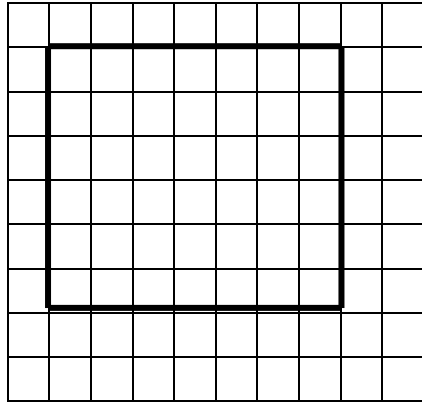
25. $\frac{1}{4} \ x \frac{340}{1} = \$85$ $(340 - 85 = \$255)$

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

29.

30. 100 blocks needed for cuboid.

   (100 – 44 = 56)

   Shape B = 27
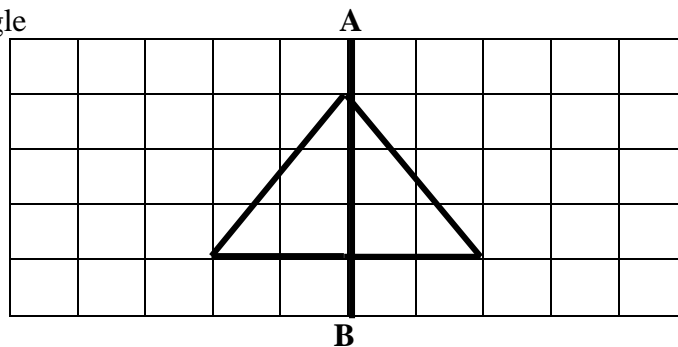
   Missing blocks = 56 – 27 = 29

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.** E (East)

34. Isosceles Triangle

A

B

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

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

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

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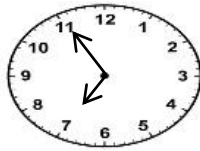   used to form the solid.

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

MATHEMATICS TEST TWO – ANSWERS

1. Seven hundred and five thousand and twenty-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.**

$$25\,\big|\,\overline{2\ 8\ 2\ 5} \quad = 1\ 1\ 3$$

11. (8 + 7) x 2 = 30cm **12.** 3.5 or $3\frac{1}{2}$ **13.**   **14.** 15 x 15 = 225cm^2

15. Pyramid **16.**   **17.** 5- quarter turns

18. (24 x 2 = 48) (48 – 17 = 31) **19.** (6 x 2 = 12 students) **20.** (20 – 8 = 12)

21. (54 – 9 = 45) (45 ÷ 3 = 15) **2.** ($60 x 5 = 300) ($\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. ($6\frac{1}{4} - 3\frac{5}{8}$ → 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. 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. Triangular-Base Prism – This shape will make it easiest for water/objects to run off the roof/ not settle on the roof.

34. a & c

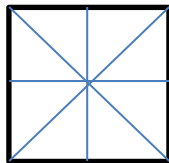**35**. Total = (85 + 72 + 75 + 43 + 65 = 340) Mean = 340 ÷ 5 = 81 = Grade A
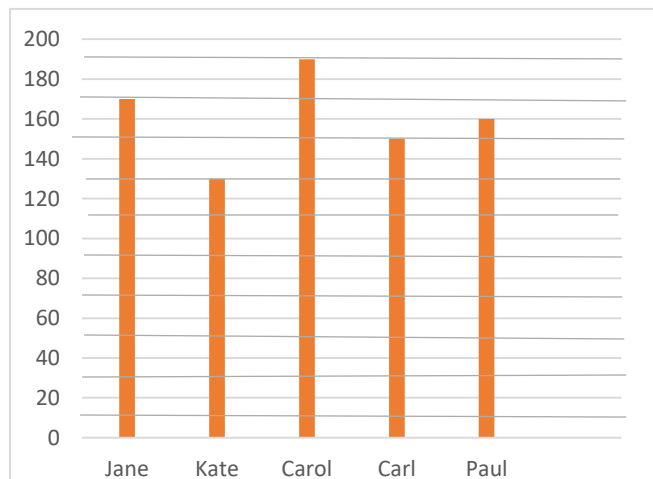
36.

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

38. (Route A= 2500 + 2500 + 3045 = 8045m) (Route B = (3070 + 1750 + 3250 = 8070m)
Route B is longer. (8070 – 8045 = **25m**)

39. (a) Triangles needed = 8

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

40. (a) $\frac{240}{3} = 80$ (b) 85 x 3 = 255   (255 – 240 = 15 more marks)

MATHEMATICS TEST THREE - 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. 450cm   **12.**

13. $\sqrt{121} = 11$ **14.** $2\frac{1}{2} \ l = 2500ml \ (\frac{2500}{250} = 10 \ glasses)$

15. Cone   **16.**
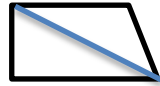
17. $<$

18. (56 + 23 + 29 = 108) $\frac{108}{3} = 36$

19. (18 + 12 + 38 = 68) (100 − 68 = 32)   **20.** (15 − 8 = 7)

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

30. (20 x 12 = 240m²)= Area of walk path and swimming pool (16 x 8 = 128m²) = A of pool
   $(240 − 128 = 112m^2)$

31. Spirit   **32.** (1000 ÷ 4 = 250) (250 ÷ 10 = 25)
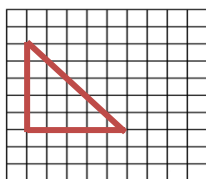
**33.** East   **34.**   Other drawings are also accepted.

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

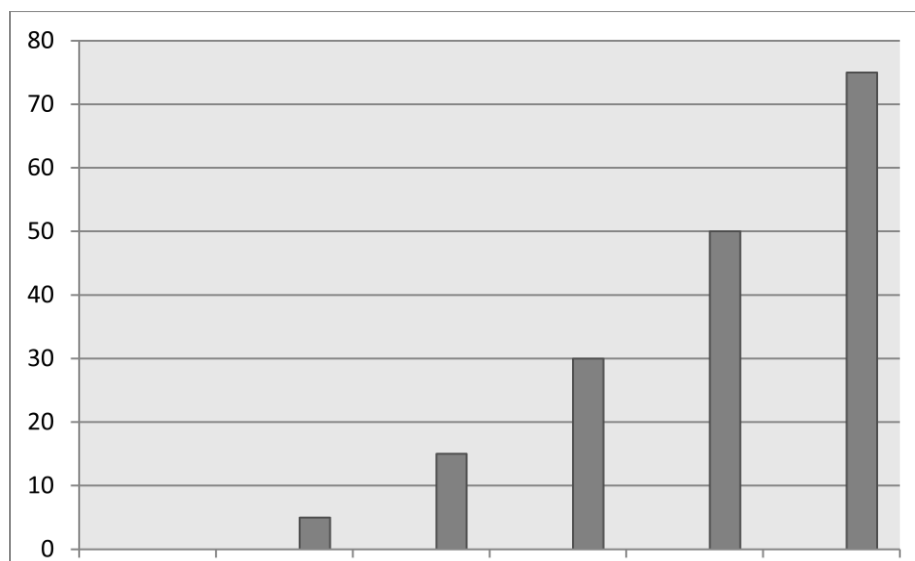**38.** (a) 25 x 2 = 50 minutes for one day. (50 x 4 = 200minutes for 4 days) (200 + (25mins for Thursday evening) = 225minutes   or 3hours 45minutes or $3\frac{3}{4}\ hrs$
(b) 1250 x 9 = 11250m = 11km 250m or 11.25km

39.
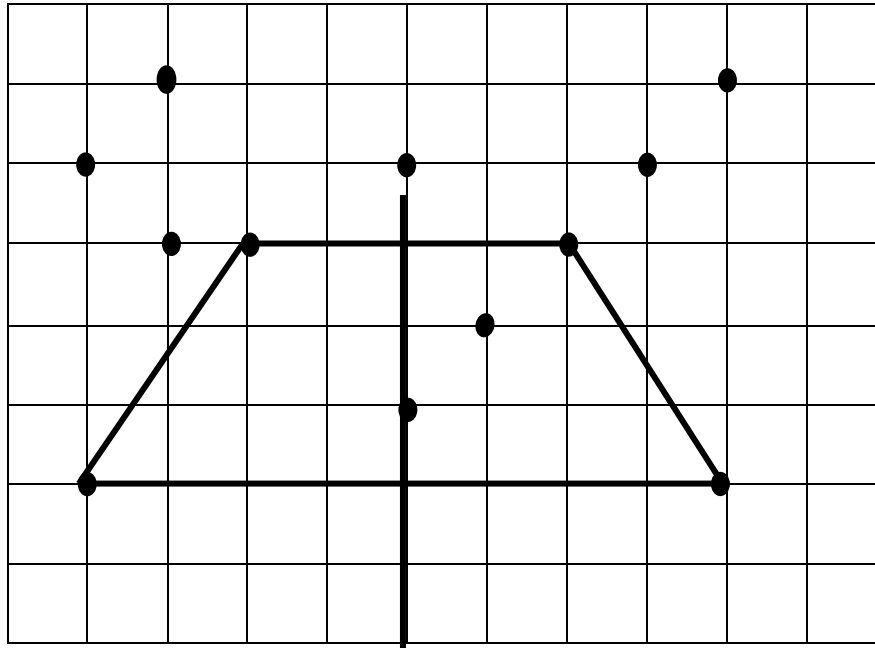
Line of symmetry

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 FOUR – ANSWERS

1. 50 407   **2.** $\frac{19}{5}$ **3.** $\frac{30}{1} \times \frac{5}{1} = 150$ **4.** 4.4   **5.** $\frac{20}{100} \times \frac{180}{1} = 36$
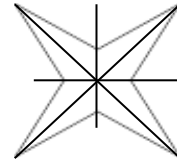
6.
```
  9 . 0 0
- 3 . 2 7
  5 . 7 3
```
7. $45 \div 100 = 0.45$ **8.** $\frac{9405}{6} = 1567 \; Remainder = 3$ **9.** $49 - 6 = 43$

10. $316 + 127 = 443$ **11.** cm   **12.** $27cm^3$ **13.** 30mins   **14.** 80 x 6 = 480g

15. cylinder   **16.** 4 lines

17. D   **18.** 63 toys   **19.** Guppy   **20.** $(45 - 15 = 30 \; children)$

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)
$(\frac{40}{6} = 6 \; groups \; R \; 4) \; (6 \; x \; 3 = 18 \; green + 1 \; green \; from \; the \; remaining \; four = 19 \; green)$

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. $(2\frac{1}{4} \; litres = 2250ml)(\frac{2250}{150} = 15)$

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.

34.
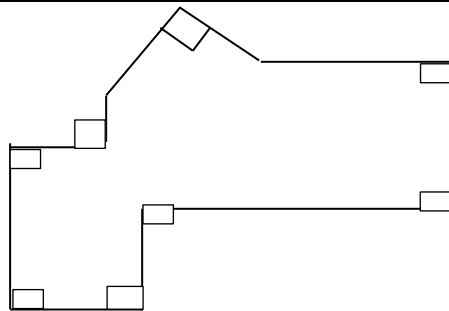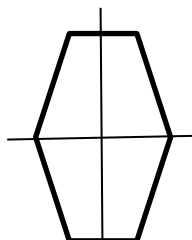
35. //// //// / - Darren ate the least.

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 x 2 = $24) (144 – 24 = $120) (120 ÷ (6+2) = 15 pencils/15sharpeners)

Total pencils = 15 + 12 = 27pencils

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

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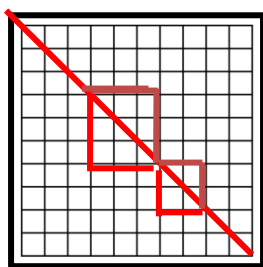$(\frac{388}{4} = 97) \quad (97 - 92 = 5)$

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.

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

15.   **16.** Cube   **17.** Angle C

18. $(124 + 286 + 208) \div 3 = \frac{618}{3} = 206$ **19.** $\frac{72}{12} = 6\ children$ **20.** 46 – 15 = 31 at least

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. $\left(3\frac{1}{2}\ x\ \frac{3}{1} = \frac{7}{2}\ x\ \frac{3}{1} = \frac{21}{2} = 10\frac{1}{2}\ km\ on\ Tuesday\right) \left(10\frac{1}{2} + 3\frac{1}{2} = 14km\right)$

28. (148 x 15 = 2220)

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.

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

39. a.
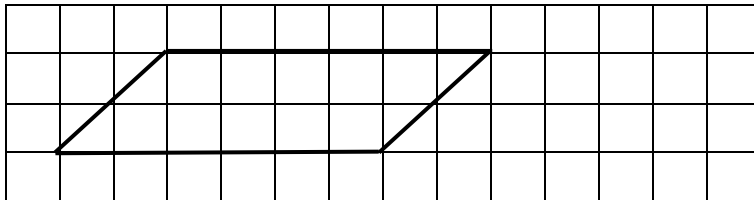
b. parallelogram

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 SIX – 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. CONTAINER A   **12**. $\sqrt{144} = 12cm$ **13**. 35 x 4 = 140cm   **14**.$\frac{270}{60} = 4\frac{1}{2} hours$
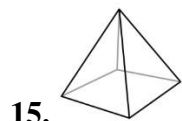
15.   **16.** G   **17.** L

18. 23   **19.** H̶H̶H̶ H̶H̶H̶ 1   **20.** $21 - 9 = 12$

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. $(500 - 350 = 150) \; (\frac{150}{500} \; x \; \frac{100}{1} = 30\%)$
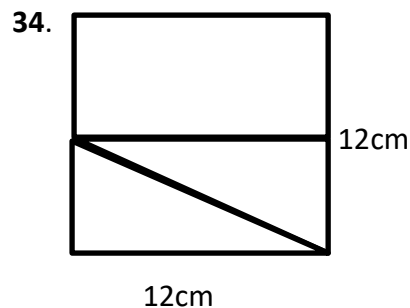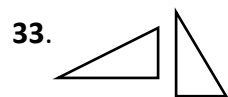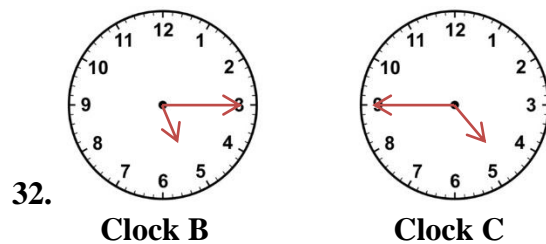
27. $(1 \; \text{chair} = \frac{1050}{3} = \$350) \; (5 \; chairs = 350 \; x \; 5 = \$1750)(A \; table = 3500 - 1750 = \$1750)$

28. $\frac{1}{4} \; x \; \frac{450}{1} = \$112.50 \; (450 - 112.50 = \$337.50)$

29. $(80 + 80 = 160 = 2 \; \text{lengths}) \; (160 \; x \; 2 = 320 = \text{twice around field}) \; (500 - 320 = 180 = 4$
width$) \; 180 \div 4 = 45\text{m for width}$

30. $4.75 + 6.04 = 10.79\text{km}$

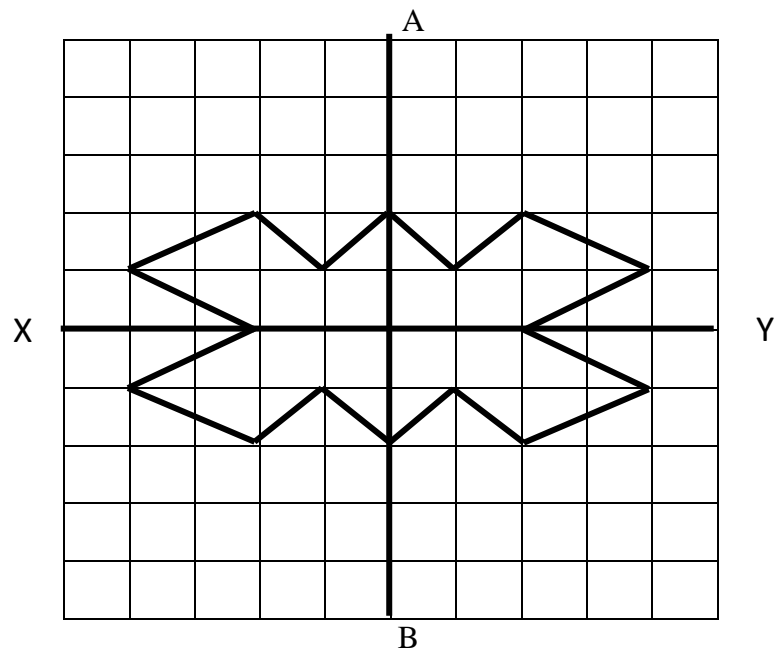**31.** Mark = 64 cubes. Jenny has 10 cubes. Missing cubes = 64 − 10 = 54 cubes

32.

Clock B   **Clock C**

33.

34.

12cm

12cm

35. $240 \div 20 = 12$ **36.** $(75 \; x \; 5 = 375) \; (375 + 87 = 462) \; (\; 462 \div 6 = 77)$
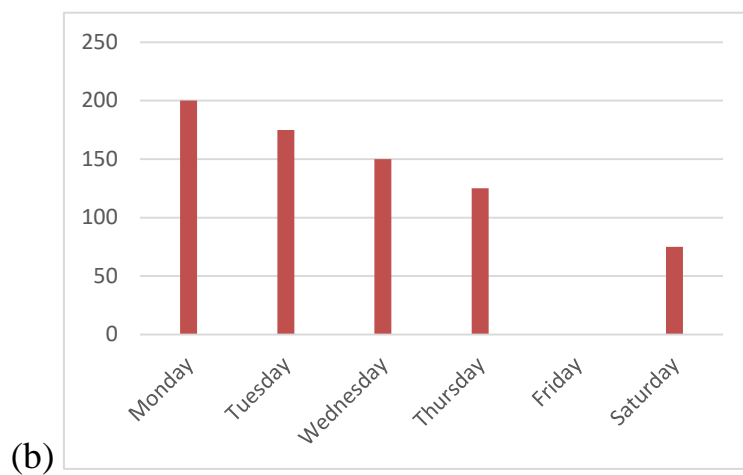
37. $20\% = \frac{1}{5} \; sold. \left(\frac{4}{5} \; remainder\right) \left(\frac{1}{4} \; x \; \frac{4}{5} = \frac{1}{5}\right) \left(\frac{3}{5} \; remainder\right) \left(\frac{3}{5} = 60\right) (\frac{60}{1} x \frac{5}{3} =$
100 oranges in total$)$

38. $(\frac{500}{20} \; x \; \frac{400}{20} = 500 \; tiles) \; (500 \; x \; \$9 = \$4500)$

39.

40. (a) 125 cubic metres of gravel.

(b)

MATHEMATICS TEST SEVEN - 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. $2.36 \ x \ 1000 = 2360$ metres   **12.** 6cm   **13.** $60.00 - $53.75 = $6.25

14.
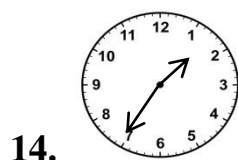
15. Triangular-Based Prism   **16.** 2 lines   **17.** Angle B

18. Dog   **19.** $305 - (64 + 74 + 67) = 100 \ (\frac{100}{2} = 50)$ **20.** $305 \div 5 = 61$

21. $(350 - 140 = 210) \ (\frac{210}{350} \ \times \ \frac{100}{1} = 60\%)$

22. $(397 \div 24 = 16 \ R \ 13$ Reasoning $- 17^{th}$ 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.

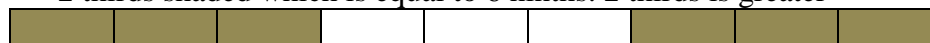| Item	Quantity	Total Cost
Bag	$190 \div 95 = 2$	$243 - (45+8) = 190$
Glue	$45 \div 15 = 3$	$45.00
Ruler	2	$8.00
Total		$243.00

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 $\div$ 3 =5groups) ($15 x 5 = $75) (Profit = 75 – 60 = $15)

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

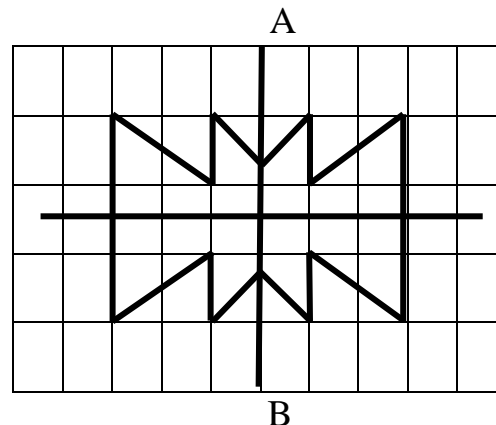**30.** (8:00am to 1:35pm = 5hrs 35mins) (6hours for parking) (6 x 6 = $36) (36x 5)

31. (25 x 80 = 2000 cm) (2000 ÷ 100 = 20 m)

32. (620cm – 20 = 600cm) (25 + 15 = 40) (600 ÷ 40 = 15 bags each)
(Total = 15 x 2 = 30 bags)

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.

35. 4 + 7 + 5 = 16 children

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

Blue = 🙂🙂   Yellow = 🙂🙂🙂🙂

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

(720 + 140 = \$860) ($\frac{860}{5}$ = \$172)

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

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. 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.

TEST EIGHT – ANSWERS

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

6. $8^2 - 35 = 64 - 35 = 29$ **7.** $8.95 + $2.30 = 11.25 **8.** $\frac{20}{100}$ x $\frac{245}{1} = 49 **9.** $\frac{2}{8} = \frac{1}{4}$
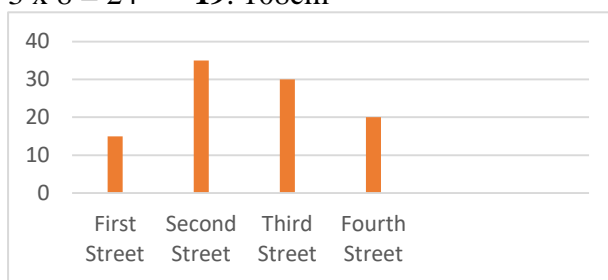
10. Ben kept $40\% = \frac{40}{100}$ x $\frac{20}{1} = 8\ marbles$

11. millilitres   **12.** $\frac{200}{60} = 3\ hours\ 20\ minutes$

13. $(60 - (12+12) = 36)\ (36 \div 2 = 18cm)$ **14.** $(3kg - 2kg = 1kg)$ (1kg = 2 halves) Ans = 2

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

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

20.

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

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

24. Purchasing one of each snack will cost Sita $23. She will have a balance of $26. She can buy 1 Nuts and 4 Juice with the change to give a total of 8 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.
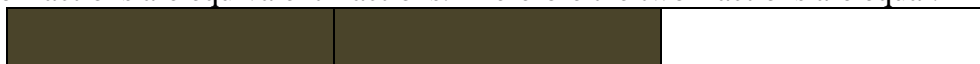
27. $(24 + 9 = 33)\ (33 \text{ x } 7 = 231)$ **28.** $(0.25 = \frac{25}{100} = 25\% \text{ or } \frac{1}{4})\ (\frac{3}{4} = 75\%)$ Therefore, both answers are correct since both answers will result in one whole.
(Any diagram to show 3 parts and 1 part to make one whole.)

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

31. $(1500 \div 250 = 6)\ 6^{th}$ container = Container F - Cost = 6 x 8 = $48

32. Route A = (1500 + 400 + 500 = 2400m) Route B = (900 + 300 + 650 = 1850m)
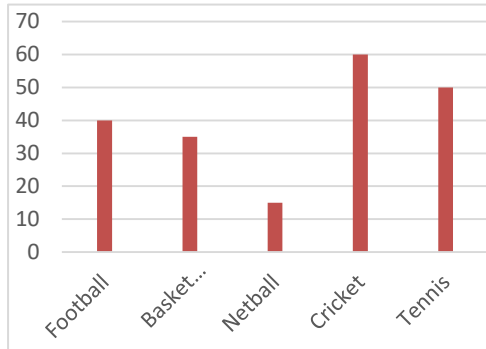
Ans: Hazel should take Route B – Route B is shorter. She would get to and from the shop faster than if she uses Route A. (Using Route B will save her time)

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

35.   **Akeel – Frequency = 4**

Renny	~~HHH~~ ~~HHH~~ ~~HHH~~	

Total = 40 x 5 = 200

200 – (40 + 15 + 60 + 50) = 35

36.

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

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

39. (a) 1. A quarter turn in an anticlockwise direction
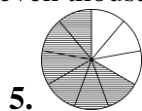   2. Three-quarter turns in a clockwise direction.
   (b)
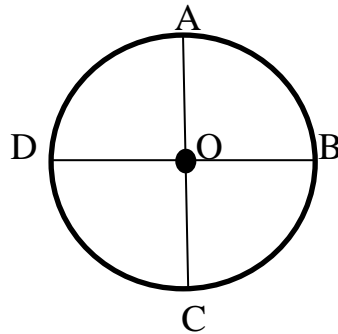
40. The most money should be spent on shirt size 17. Most people in the club are wearing size 17. The most needed shirt size will be size 17.

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.** | 1:50 | **12.** Watermelon

13. $\frac{6000}{500}$ = 12   **14.** 3000 + 55 = 3055m

15. AB   **16.** Square-Based Pyramid   **17.** 5

18. 48 + 36 + 21 = 105   ($\frac{105}{3}$ = 35)

19. Angel   **20.** 4

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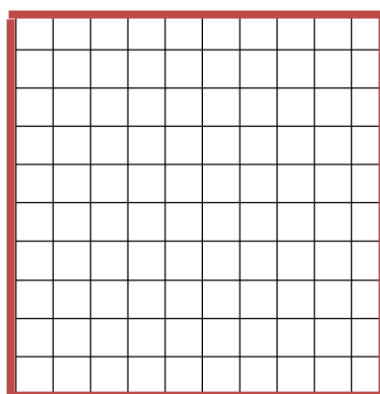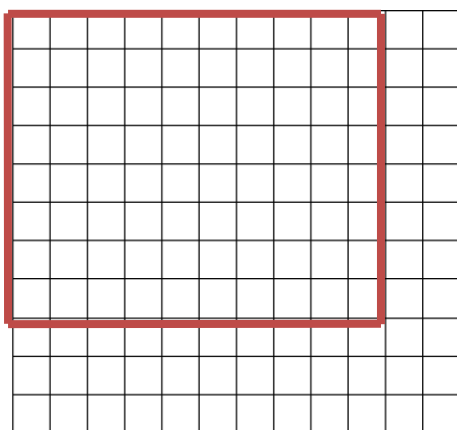
29. $\frac{3000}{200}$ = 15 $packets$

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. Any quadrilateral(four sided figure)

34.
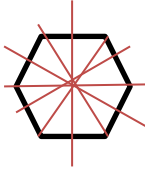
35. $(60 + 35 + 55) \div 3 = 50$ $(50 \times 2 = 100)$ $(100 - 84 = 16)$

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

38. $(250 \times 10 = 2500g)$ $(2500g - 750g = 1750g = 1.75kg)$ Nearest Whole $= 2kg$

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

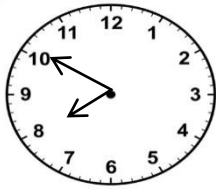**40**. Game 1= 22, Game 2 = 32   Game 3 = 26   Game 4 = 40

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

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.   **12.** kilometre (km)   **13.** $\frac{450}{10} = 45$ pieces   **14.** $\frac{56}{4} = 14cm$

15. Parallelogram

16.
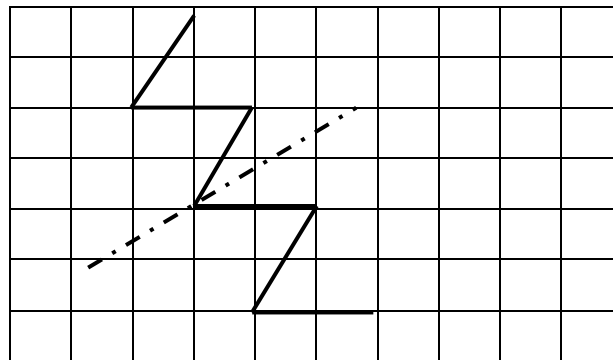
17. C – triangular base prism

18. $(19 + 7 + 14 + 11 + 14 = 65) \, (\, 65 \div 5 = 13 \,)$ **19.** $(25 - 8 = 17)$ **20.** $(64 - 32 = 32)$

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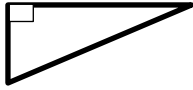
28. $(\left(\frac{40}{100} \, x \, \frac{160}{1} = \$64 \, per \, book. \right) (160 - 64 = \$96 \, bag)(96 \, x \, 4 = 384)(384 + 64 = \$448)$

29. $\left(\frac{9750}{250} = 39 \, bags\right) (\, 39 \, x \, \$3 = \$117)$ **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. $\frac{3}{4}$ **34.** Square-Based Pyramid

35.

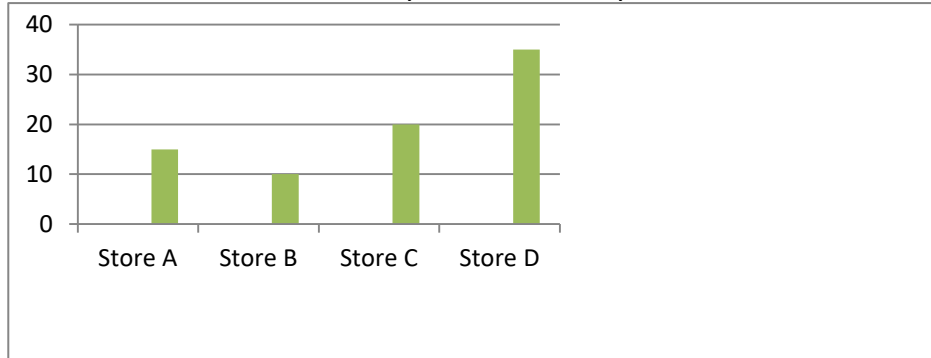| Second Year	🧸 🧸 🧸 🧸 🧸 🧸
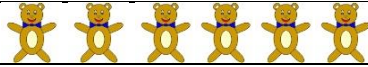
Second Year received the most toys. This class may have more students than the other classes.

36.

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

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.

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. 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 ELEVEN - 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.** 64 cm^2 **12.** 6.5cm   **13.** June 21
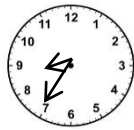
14.   **15.** B   **16.** equilateral   **17.** Cone

18. ⁄⊮ ⊮ ⁄⁄   **19.** Cricket   **20.** 75 – 60 = 15 children

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 $years\ now$)

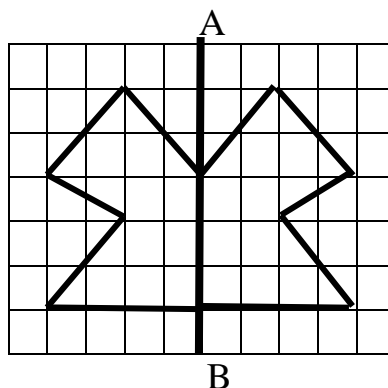**28.** (1 x 2) + (2 x 5) + (1 x 8) = 20 points (80 – 20 = 60 points) (60 ÷ 10 = 6 times)

29. 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)
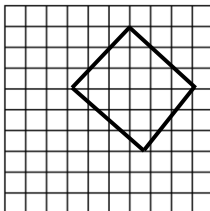
32. Volume = 128 – 64 = 64 cubes

33.

34.

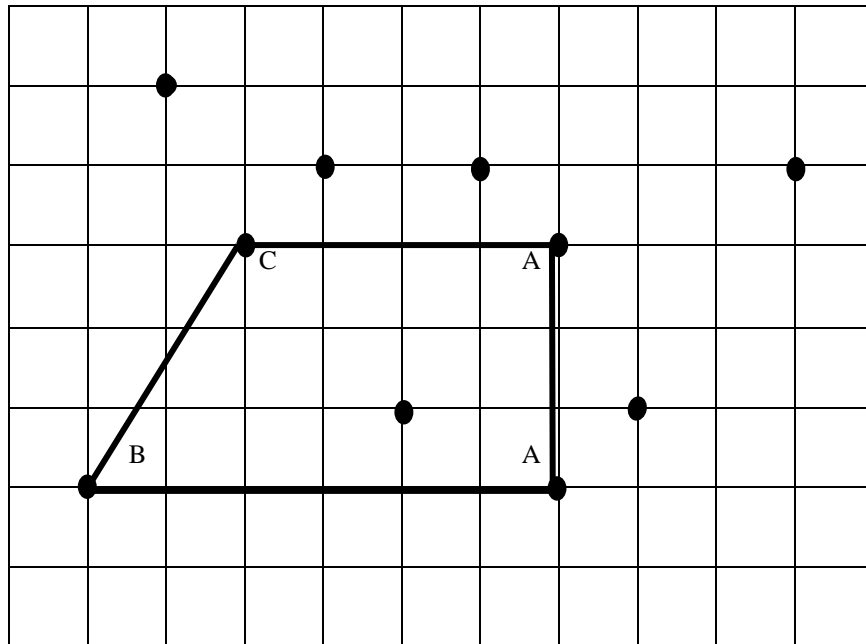| ANGLE	LETTERS
Greater than a right angle	A, B, D
Less than a right angle	C, E

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

36. Shade 7 blocks

37. $(300 \; x \; \$2 = \$600) \left(45\% = \frac{9}{20}\right) \left(\frac{9}{20} + \frac{3}{10} = \frac{15}{20} = \frac{3}{4}\right) \left(\frac{3}{4} \; x \; \frac{300}{1} = 225\right)$
$(225 \; x \; 2.50 = \$562.50) (\textbf{LOSS} = 600 - 562.5 = \$37.50))$

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

**39.**

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 TWELVE – 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.** 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.** Isosceles Triangle   **16.** cuboid   **17.** 2   **18.** 0

19. 28

20.
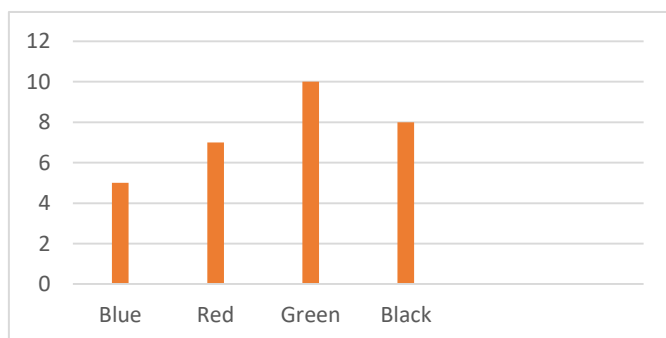
21. $\frac{1}{2} + \frac{3}{4} = \frac{5}{4}\ (\frac{5}{4} \div 2 = \frac{5}{4}\ x \frac{1}{2} = \frac{5}{8})$

22. (215 − 56 = 159) (159 + 215 = 374 marbles)

23. (6.30 ÷ 7 = \$0.90 = one pen) ($1\frac{1}{2}\ dozen = 18\ x\ 0.9 = \$16.20$)

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. $\frac{30}{100}\ x \frac{450}{1} = \$135$ (450 − 135 = \$315)

27. (25 x 5 = \$125) (375 − 125 = \$250 balance) (250 ÷ 25 = 10 weeks)

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

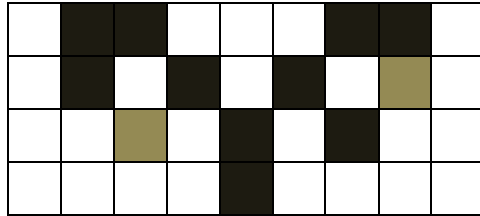**29.** (5kg 345g + 2kg 50g = 7kg 395g) (25kg -7kg 395g =17kg 605g)

30.
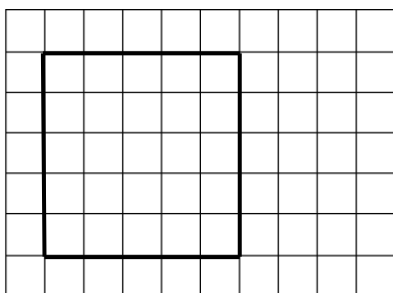
The area of the seventh square can be found by multiplying 7 by 7.

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

32. $\frac{80 \times 50}{5 \times 5} = 160$

33.

34.

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

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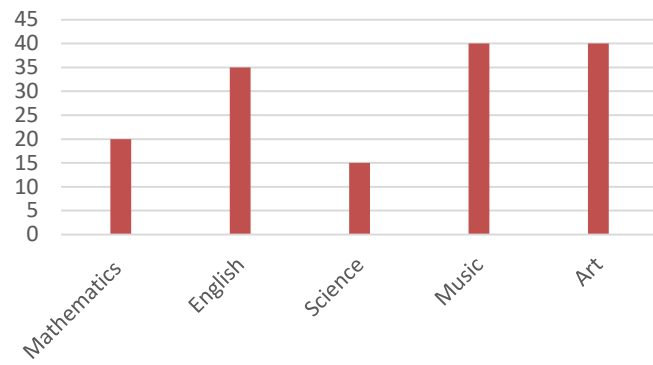
37. (8623 – 6428 = 2195) (8264 - 6843 = 1421) (1421 + 2195 = 3616)

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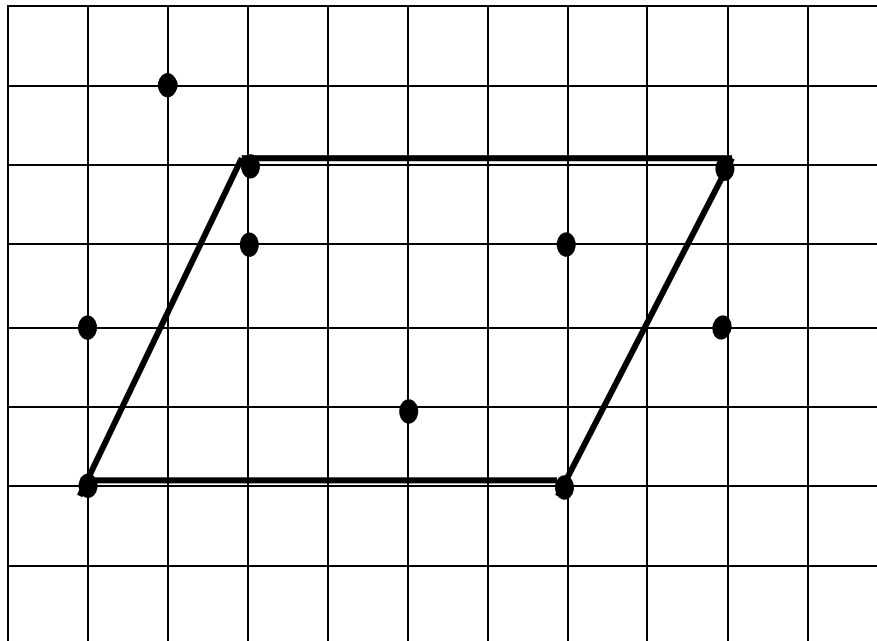
(b) Zero lines of symmetry   (c) 2 angles

40.

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

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

TEST THIRTEEN – ANSWERS

1. 4   **2.** 48   **3.** $7^2 + 1 = 50$ $(5^2 = 25)$ $(25 \text{ X } 2 = 50)$ ($\square$ = 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.** 4kg 830g

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

15. Isosceles Triangle   **16.** Square based pyramid   **17.** B

18. 58 x 5 = 290   **19.** 32   **20.** 4 x 6 = 24

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

22. (3875 – 287 = 3588 ducks) (3875 + 3588 = 7463)

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

24. | 198 | **x** | 3 | The 23 was distributed into 20 and 3. 198 – 23times can be 198 – 20 times added to 198 – 3 times

25. $\frac{1}{8}$ $x\frac{720}{1}$ = \$90 per week (90 ÷ 6 = \$15 each day.   **26.** $\frac{612}{1}$ $x\frac{5}{2}$ = 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.** $\frac{80}{100}$ $x\frac{400}{1}$ = 320 (320 x 40 = \$12 800)

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.
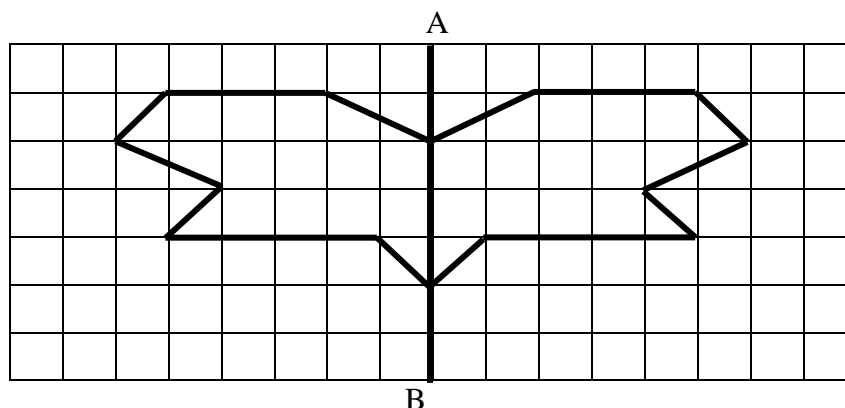
34. 6 right angles

35. (7 + 8 = 15 students)

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

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. (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) NE   (b) SW

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

TEST FOURTEEN – 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.** 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. 　　**16.** Smaller than a right angle　　**17.** Isosceles

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

20. (19 − 13 = 6 more pencils)

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.** $\frac{1}{2} x \frac{60}{1} = \$30$ $\left(\$30 = \frac{2}{5}\right)$ $\left(Zack's\ Total = \frac{30}{1} x \frac{5}{2} = \$75\right)$

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$mins$)
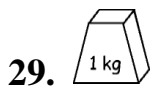
29. = 2 oranges
　　1 orange = ½ kg or 500g

30. A small square = 3cm x 3cm = 9cm^2
　　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. 2 lines of symmetry　　　　**34.** Right-Angle & Isosceles

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

36. 120 – 90 = 30 children

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