TEST 5

SECTION 1

1) Ninety-six thousand, four hundred and five.

2) Factors of 15 = 1, 2, 5, 15 = 4 factors

3) $0.68 = \dfrac{68 \div 4}{100 \div 4} = \dfrac{17}{25}$

4) $4.13 \times 0.4 = 1.652$

5) $(14 - 10) \times 8 = 8 \times \underline{4}$

6) 2.06km – 1.65km = 0.41km shorter from Jason's house to the school

7) $y + 3^3 = 48$
   $y + (3 \times 3 \times 3) = 48$
   $y + 27 = 48$
      $y = 48 - 27$
      $y = 21$

8) Class = 45 pupils
   Boys = 9
   Girls = 45 – 9 = 36 = $\dfrac{36 \div 9}{45 \div 9} = \dfrac{4}{5}$

9) Combinations to make 11 are:
  1 + 10*
  2 + 9   9 – 2 = 7
  3 + 8   8 – 3 = 5
  4 + 7   7 – 4 = 3
  6 + 5   6 – 5 = 1

So the number is 74.

TEST 5

10) 2019
   $\underline{-\ \ 28}$
   1991 Tom was born

11) $75.35 = 1 × $50 = $50
            1 × $20 = $20
            1 × $5 = $5
   35 cents in coins:
            1 × 25c = 0.25
            1 × 10c = 0.10
   3 bills / 2 coins

12)

5 ☐ 2

X_____9

5 3 2 8

☐ = 9

9 | 5 3 ^{8}2 ^{1}8
        5 **9** 2

13) Kilograms

14) A = 1 pair of parallel lines

15) Perimeter of shape = 32cm
    Length of x = 32cm – (2cm + 5cm + 3cm + 8cm + 8cm)
             = 32cm – 26cm = 6cm

16) Allan = 36 marbles
    Paul = 82 marbles
    David = 68 marbles
    Total = 36 + 82 + 68 = 186 marbles
    Mean = 186 marbles ÷ 3 boys = 62 marbles

17)
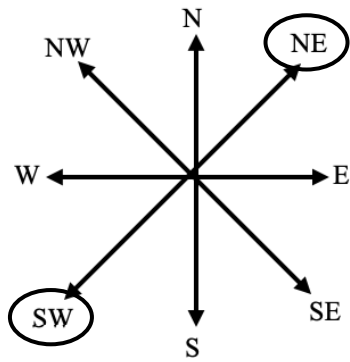
North East

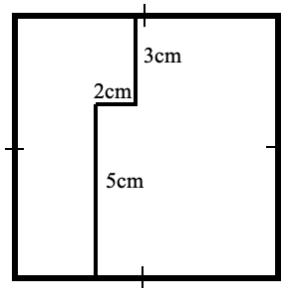18) Triangular Based Pyramid

19) Mode = 19 runs

20) 60 Children ÷ 10 😊 = 6 😊

SECTION 2

21) $0.3 = \dfrac{3}{10}$

$\dfrac{3}{10} \times \dfrac{\$990}{1} = \$297$

$\$297 \approx \$300$

22) Pumpkin = 3kg 40 g

∴ 1 piece = 3,040g ÷ 4 = 760g

23) Joe's journey to school

750m + 750m + 750m + 1,250m = 3,500m = 3.5km

24)

1 Side Square = 5cm + 3cm = 8cm

Area of Square = Side × Side

= 8cm × 8cm

= 64cm^2

25) Sue = 3 laps

John = 3 × 4 = 12 laps

26) 1^{+0}, 1^{+1}, 2^{+1}, 3^{+2}, 5^{+3}, 8^{+5}, $\underline{\mathbf{13}}^{+8}$, 21^{+13}, $\underline{\mathbf{34}}^{+21}$, 55

27) 1st Stop = 19 people left

2nd Stop = 17 people got on

After Second Stop = 63 people

Start of Journey = 63 + (19 − 17) = 63 + 2 = 65 persons

28) 18 Triangles

29) $\frac{2}{5}$ of Savings = \$60

Total Savings $= \frac{5}{2} \times \frac{60}{1} = \$150$

To calculate all of Marias' savings since \$60 represents 2 parts out of the 5 parts of her savings, divide \$60 by 2 to get 1 part. Then, multiply your answer of \$30 by 5 parts to get the whole \$30 × 5 = \$150. Using the reciprocal of the $\frac{5}{2}$ is the same as dividing by 2 and multiply by 5.

30) 1 Apple Pie = \$37.00 + 1 Free Apple Pie.
   Mother needs 5 Apple Pies.
   She must purchase 3 Apple Pies × \$37 = \$111
   Mother's bill will be \$111 and she will get
   6 Apple Pies.

31) 3 apples = \$30
   ∴ 1 apple = \$30 ÷ 3 = \$10

   1 apple + 2 grapes = \$18
           2 grapes = \$18 − \$10 (apples) = \$8
           ∴ 1 grape = \$8 ÷ 2 = \$4

   1 grape + 1 watermelon = \$2
           ∴ 1 watermelon = \$4 (grape) − ? = \$2
                         = \$4 − \$2 = \$2
               1 watermelon = \$2

   1 apple + 1 grape + 1 watermelon = \$10 + \$4 + \$2
                                  = \$16.00

32)
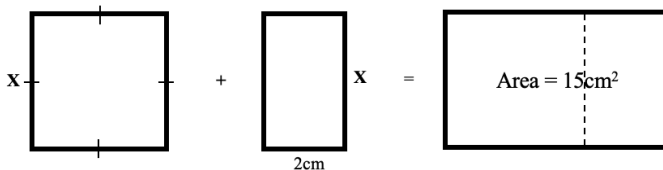
Area of Rectangle = L × W = 1 × 15
                          3 × 5
                          5 × 3
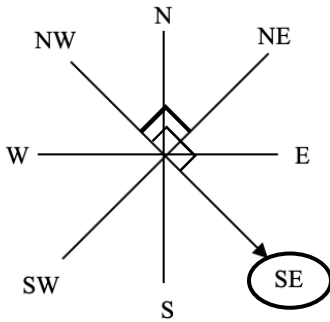   15 × 1
Length of Rectangle = 5cm

TEST 5

Side of Square 'x' = 5cm – 2cm = 3cm

33)

3 – 90° Turns

34) Rotten = $0.4 = \dfrac{4}{10}$ of harvested pepper

Good = $0.6 = \dfrac{6}{10}$ of harvested pepper

Sold 60% of $\dfrac{6}{10} = \dfrac{60}{100} \times \dfrac{6}{10} = \dfrac{360}{1000} = \dfrac{36}{100}$

$\qquad = \dfrac{9}{25}$ harvested pepper

$\therefore$ Rotten + Sold $= \dfrac{4}{10} + \dfrac{9}{25} = \dfrac{20}{50} + \dfrac{18}{50} = \dfrac{38}{50}$ harvested pepper

Not sold $= \dfrac{50}{50} - \dfrac{38}{50} = \dfrac{12}{50} = 384$ harvested pepper

$\therefore$ All Harvested $= \dfrac{50}{12} \times \dfrac{384}{1} = 1{,}600$ peppers

Peppers Harvested = 1,600 peppers

35) Mean = 90 marks

Total = $90 \times 3 = 270$ marks

Total = $90 \times 4 = 360$ marks

Lowest mark needed in 4th Test = 360 – 270 = 90 marks

36) Billy = $1,242.00

Brother $= \dfrac{5}{9} \times \dfrac{1{,}242}{1} = \$690$

$\therefore$ remainder = $1,242 – $690 = $552

Sister $= 0.25 = \dfrac{25}{100} = \dfrac{1}{4} \times \dfrac{552}{1} = \$138$

Money Left = $552 – $138 = $414

37) Traffic Light A = 3 seconds $\Big]$ 12 seconds

Traffic Light B = 4 seconds

38) My Age = 6 years
Neighbour = 6 years ÷ 2 = 3 years

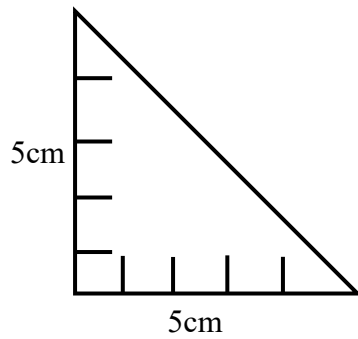I am 3 years older than my neighbour. If I am 71 years old then 71 – 3 = 68 years
Neighbour = 68 years.

39) Day 10 = Full
Day 9 = 1 ÷ 2 = $\frac{1}{1} \times \frac{1}{2} = \frac{1}{2}$

40)

5cm

5cm

TEST 5

SECTION 3

41) Regular Time 80 hours @ $40 per hour = 80 × $40
$$= \$3,200$$

Saturday = Time and a Half = $1\frac{1}{2}$ × $40
$$= \frac{3}{2} \times \$40 = \$60 \text{ per hour}$$

Sunday + Public Holiday = Double Time
$$= \$40 \times 2 = \$80 \text{ per hour}$$

1 week = $4,560 – (Regular Time) $3,200
$$= \$1,360$$
Sunday Over Time = 8 hours × $80 = $640

∴ Saturday Over Time = $1,360 – $640 = $720
Saturday Over Time Hours = $740 ÷ $60 = 12 hours

42) Similarities
   (i) 1 pair of Parallel Sides
   (ii) 1 line of Symmetry

Differences
   (i)One is a Quadrilateral 4 Sides/ Pentagon 5 Sides
   (ii) Trapezium – No 90° angle
      Pentagon – 2-90° angles

43) 1 year = $21,000
   ∴ 4 years = $21,000 × 4 = $84,000
   Simple Interest = $84,000 – $60,000 = $24,000
   Monthly Interest = $21,000 ÷ 12 = $1,750
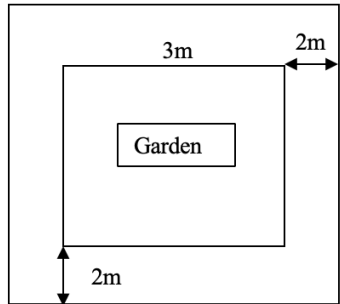   Rate of Interest Per Annum = $\frac{\text{S. I.} \times 100}{P \times 4}$
$$= \frac{\$24,000 \times 100}{\$60,000 \times 4} = 10\% \text{ per annum}$$

44)

Area of Pathway = (7m × 7m) – (3m × 3m)
   = (700cm × 700cm) – (300cm × 300cm)
   = 490,000cm² – 90,000cm²
   = 4000,000cm²
Area of Tile = 20cm × 20cm = 400cm²
No. of Tiles Needed = 400,000cm² ÷ 400cm²
   = 1,000 Tiles
Cost of Tiles = 1,000 × $11 = $11,000

45) Total Newspapers sold = 405
   Mon.   = 45
   Tues.   = 55
   Wed.   =
   Thurs. = 40
   Fri.   =
   Sat.   = 70
   Sun.   = 75
   Total = 285

   Wed and Fri = 405 – 285 = 120
         Wed = 120 ÷ 2 = 60
          Fri = 60

Sunday has the greatest number of newspapers sold. One reason for this could be because many people are at home on a Sunday, so they buy the newspaper to relax and read.