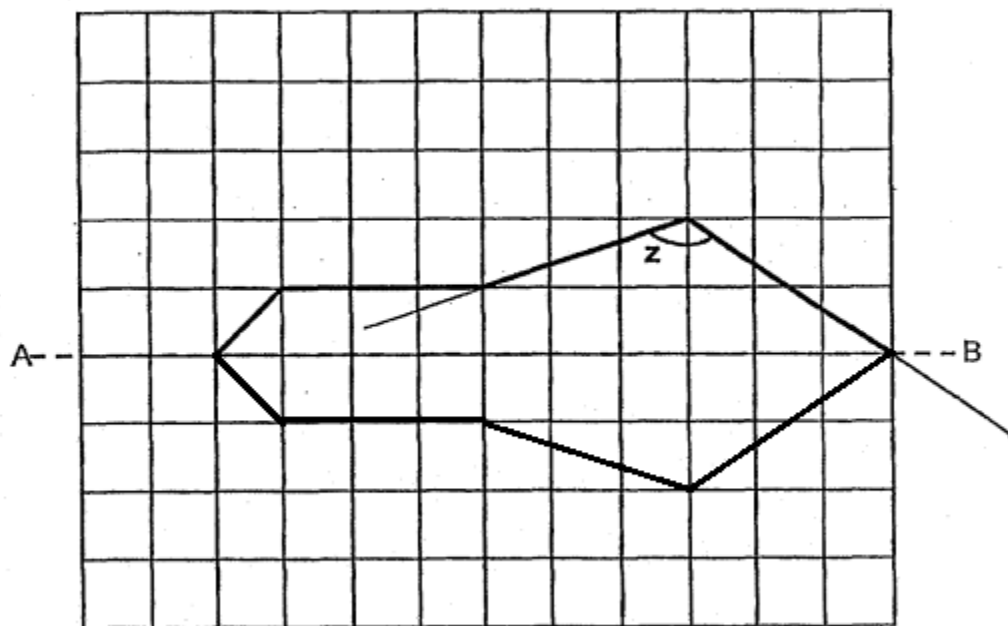


Word Problem Worksheet
& Solutions
For St Nicholas Paper
P5 Mathematics CA1 2018

Show your working clearly in the space provided for each question and write your answers in the spaces provided.

6. a) $\angle Z = 128^\circ$
b)



Ans: (a) 128°
(b) as in figure

7. Amount of cooking oil used on Monday = $\frac{1}{3} \times 84 = 28\ell$
Total cooking oil used = $28 + 20 = 48\ell$

Ans: 48ℓ

8. a)
Number pattern is a repetition of series four numbers 7, 4, 5, 0

Number of repetitions in 125th number = $125 \div 4 = 31$ remainder 1

That means after 31 repetitions of 7,4,5,0, it ends with first number of next series, which is 7.

- b)
Sum of 7,4,5,0 = 16
Sum of 31 repetitions of series = $31 \times 16 = 496$
Total sum of 125 numbers = $496 + 7 = 503$

Ans: (a) 7
(b) 503

9. a)
Number of books loaned out on Wednesday = 32

- b)
Number of books loaned out on Thursday = 16
Number of books loaned out on Monday = 64

Difference between Monday and Thursday = $64 - 16 = 48$

Ans: (a) 32
(b) 48

10. a)
Number of medium sized shirts sold = 85
Total number of shirts sold = $30 + 85 + 60 + 75 = 250$
Fraction of medium sized shirts sold = $85 \div 250 = \frac{17}{50}$

- b)
Total sales of small size shirt = $30 \times 12 = \$360$
Total sales of medium size shirt = $13 \times 85 = \$1105$
Total sales of large size shirt = $14 \times 60 = \$840$
Total sales of x-large size shirt = $15 \times 75 = \$1125$

Shirt size with most sales is X-Large size

Ans: (a) $\frac{17}{50}$

(b) X-Large size

-
11. Difference between number of pupils in sewing class and pottery class at the end = $146 + 17 + 17 = 180$

Let number of pupils in pottery class = u
Let number of pupils in sewing class = $6u$

Difference between number of pupils sewing class and pottery class = $6u - u = 5u = 180$
 $u = 180 \div 5 = 36$

Total number of pupils = $u + 6u = 7u = 7 \times 36 = 252$

Ans: 252

12. Let $\frac{1}{40} \text{ kg} = u$

$$\text{Parcel B} = \frac{3}{8} = \frac{15}{40} = 15u$$

$$\frac{1}{4} \text{ kg} \rightarrow 10u$$

$$\text{Mass of Parcel A} = 15u + 10u = 25u$$

$$\frac{1}{5} \text{ kg} \rightarrow 8u$$

$$\text{Mass of Parcel C} = 25u - 8u = 17u$$

$$\text{Mass of 3 parcels} = 15u + 25u + 17u = 57 \times \frac{1}{40} = 1\frac{17}{40} \text{ kg}$$

Ans: $1\frac{17}{40} \text{ kg}$

13. a)
Distance between 1st and 19th banner = $85 \times 18 = 1530 \text{ cm}$

b)
Number of banners = $(4590 \div 85) + 1 = 55$

Ans: (a) 1530 cm
(b) 55

14. a)
Point Y is South-east of Point A
b)
i) 2 steps to the West
ii) 3 steps to the North
c)
Starting point was Q

Ans: (a) South-east
(b) i) West
ii) North
(c) Point Q

-
15. Difference between number of stamps Susan and Leanne had = $1320 - 220$
= 1100

Let number of stamps Leanne had = u
Number of stamps Susan had = $5u$
Difference between Susan and Leanne = $5u - u = 4u$
 $4u = 1100$
 $u = 1100 \div 4 = 275$

Total stamps Leanne and Susan had at the end = $u + 5u = 6u = 6 \times 275$
= 1650

Number of stamps that Ronald gave = $1650 - 220 - 1320 = 110$

Number of stamps Ronald had left = $599 - 110 = 489$

Ans: 489 stamps

16. a)

$$\text{Number of meatballs } \frac{1}{2} \text{ of pupils took} = 36 \times \frac{1}{2} \times 5 = 90$$

$$\text{Number of meatballs } \frac{1}{6} \text{ of pupils took} = 36 \times \frac{1}{6} \times 2 = 12$$

$$\text{Number of remaining meatballs} = 150 - 90 - 12 = 48$$

b)

$$\text{Number of remaining pupils} = 36 - 36 \times \frac{1}{2} - 36 \times \frac{1}{6} = 12$$

$$\text{Number of meatballs remaining pupils took} = 48 \div 12 = 4$$

Ans: (a) 48
(b) 4

17. a)

Let cost of each pen = u

Cost of ruler = $u - 0.65$

$$\text{Total cost of 5 pens and a ruler} = 5u + u - 0.65 = 8.35$$

$$6u = 9$$

$$\text{Cost of pen} = u = 9 \div 6 = \$1.50$$

b)

$$\text{Cost of ruler} = 1.50 - 0.65 = \$0.85$$

$$\text{Total cost of 8 pens and 2 rulers} = 8 \times 1.50 + 2 \times 0.85 = \$13.70$$

$$\text{Additional money needed} = 13.70 - 10 = \$3.70$$

Ans: (a) \$1.50
(b) \$3.70

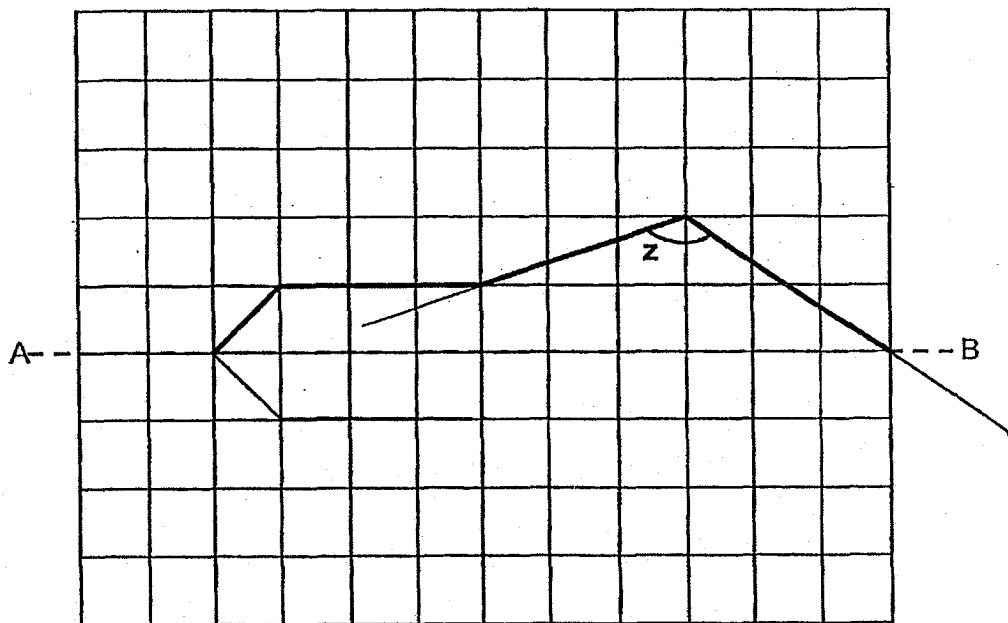
For questions 6 to 17, show your working clearly and write your answers in the spaces provided. The number of marks available is shown in brackets [] at the end of each question or part-question.

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(45 marks)

6. a) Measure $\angle z$.

b) Complete the symmetric figure with line AB as the line of symmetry. [2]



Ans : (a) _____ [1]



7. Chef Chan bought 84 l of cooking oil. He used $\frac{1}{3}$ of it on Monday. He then used another 20 l of it on Tuesday. How much cooking oil did he use altogether?

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Ans : _____ [3]

8. The first 15 numbers of a number pattern are given below.

7, 4, 5, 0, 7, 4, 5, 0, 7, 4, 5, 0, 7, 4, 5, ...
1st 15th

- a) What is the 125th number?
b) What is the sum of the first 125 numbers?

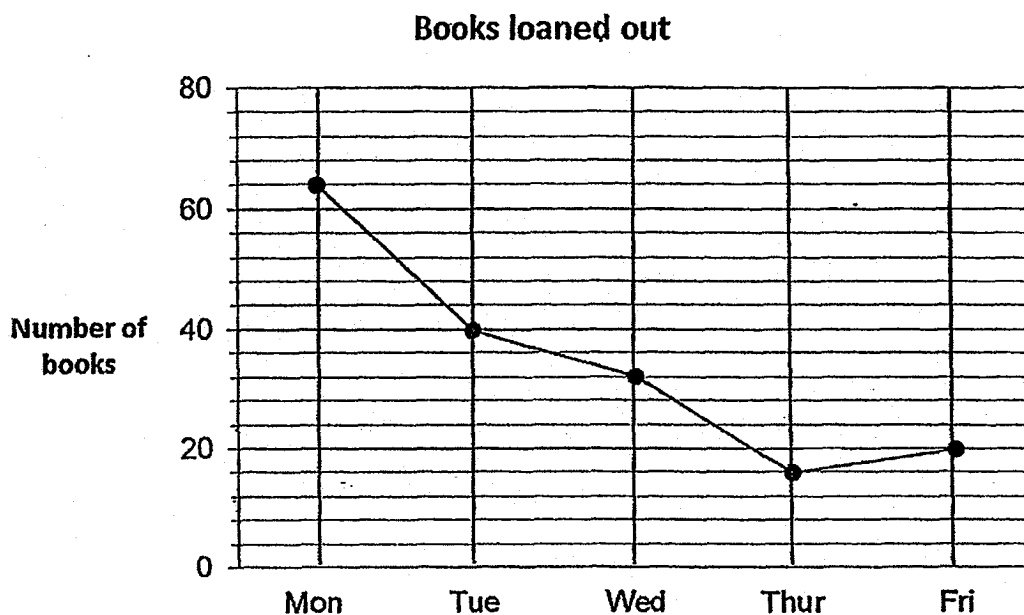
Ans : (a) _____ [1]

(b) _____ [2]



9. The line graph below shows the number of books loaned out by a school library over 5 days. Use the line graph to answer the questions.

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- a) How many books were loaned out on **Wednesday**?
- b) How many more books were loaned out on **Monday** than on **Thursday**?

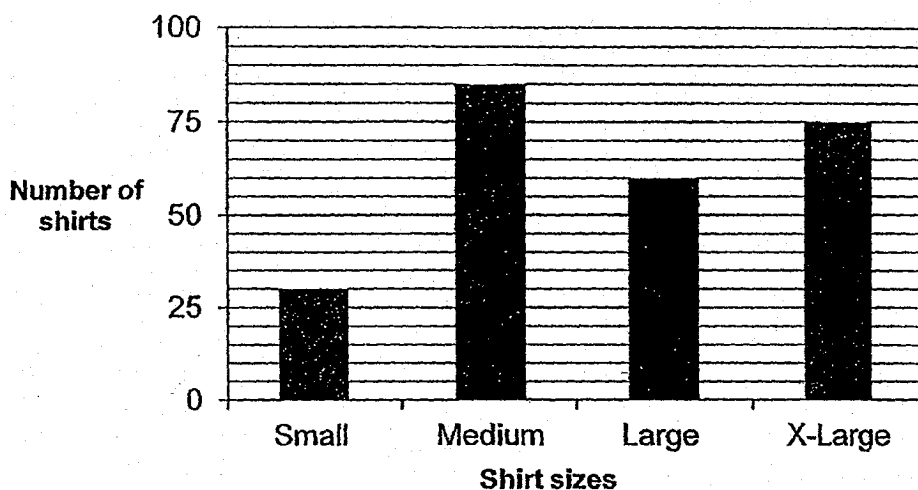
Ans : (a) _____ [1]

(b) _____ [2]



10. The bar graph below shows the number of shirts sold for each size by a shop in a week.

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The table below shows the prices of the shirts.

Size of shirt	Price per shirt
Small	\$12
Medium	\$13
Large	\$14
X-Large	\$15

- What fraction of the shirts sold were medium-sized? Give your answer in the simplest form.
- From the sale of which size of shirt did the shop collect the most amount of money?

Ans : (a) _____ [1]

(b) _____ [2]

11. For an enrichment program, pupils were allowed to attend either the Sewing Class or the Pottery Class. The number of pupils who attended the Sewing Class was 146 more than the number of pupils who attended the Pottery Class. 17 pupils from the Pottery Class decided to attend the Sewing Class. The number of pupils who attended the Sewing Class was 6 times the number of pupils who attended the Pottery Class. Find the total number of pupils in the 2 classes.

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this space

Ans : _____ [3]



12. Ravi collected 3 parcels, A, B and C. Parcel A is the heaviest and Parcel B is the lightest. The mass of Parcel B is $\frac{3}{8}$ kg. The difference in the mass between Parcel A and Parcel B is $\frac{1}{4}$ kg. The difference in the mass between Parcel A and Parcel C is $\frac{1}{5}$ kg. Find the total mass of the 3 parcels.

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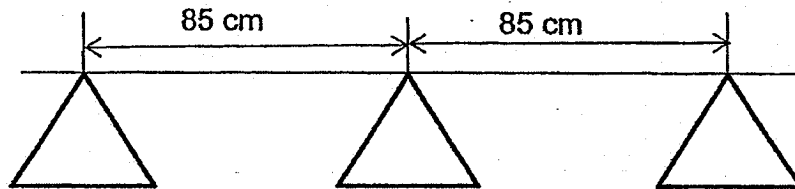
Ans : _____ [4]



13. There are some banners hanging on a rope along the corridor of the school hall. The distance between every 2 banners is 85 cm.

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this space

- a) Find the distance between the 1st banner and 19th banner. Give your answer in metres and centimetres.
- b) Given the distance between the first banner and the last banner is 4590 cm, how many banners are there altogether?

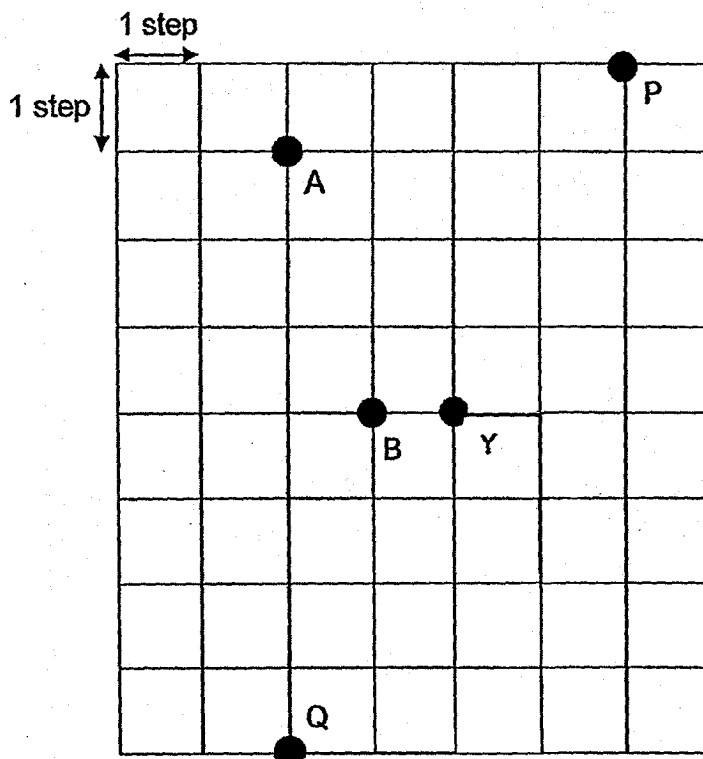


Ans : (a) _____ [2]

(b) _____ [2]



14. Look at the square grid below.



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this space

- Point Y is _____ of Point A.
- Patsy wants to move from Point Y to Point A. She needs to move 2 steps to the (i) _____ and 3 steps to the (ii) _____.
- Patsy was at a certain point and wanted to reach Point Y. She followed the instructions and arrived at Point Y.

Instructions:

Take 1 step to the west
Then 4 steps to the north
Then 3 steps to the east

What was her starting point?

Ans: (a) _____ [1]

(b)(i) _____, (ii) _____ [2]

(c) _____ [1]



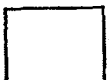
15. The table below shows the number of stamps Leanne, Susan and Ronald had.

Name	Number of stamps
Leanne	220
Susan	1320
Ronald	599

Ronald gave Leanne and Susan an equal number of stamps each. Then Susan had 5 times as many stamps as Leanne. How many stamps did Ronald have left?

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Ans : _____ [5]



16. Mr Bay prepared 150 meatballs for 36 pupils.

$\frac{1}{2}$ of the pupils took 5 meatballs each and $\frac{1}{6}$ of them took 2 meatballs each.

The rest of the meatballs were then distributed equally among the remaining pupils.

- a) How many meatballs were distributed to the remaining pupils altogether?
- b) How many meatballs did each of the remaining pupils take?

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Ans : (a) _____ [4]

(b) _____ [1]



17. Denise wants to buy some pens and rulers. 5 pens and a ruler cost \$8.35.

A ruler costs \$0.65 less than a pen.

- a) How much does a pen cost?
- b) Denise wants to buy 8 pens and 2 rulers but she has only \$10. How much more money does she need?

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Ans : (a) _____ [3]

(b) _____ [2]

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**** End of Paper ****