INTERNATIONAL INDIAN SCHOOL, DAMMAM

WORKSHEET FOR MIDTERM EXAM 2023 – 24

MIDDLE SECTION

CLASS – 8 **SUBJECT – MATHEATICS**

CH:2 LINEAR EQUATIONS IN ONE VARIABLE

1. Which of the following is not a linear equation in one variable?

A. $33z + 5 = 0$

B. $33(x+ y)=0$

C. $33x+5 = 0$

D. $33y+5 = 0$

2. The solution of $2x-3=7$ is_____.

3. The solution for $3m = 5m – (8/5)$ is:_____.

4. Check whether the linear equation $3x + 5 = 11$ is true for $x = 2$.

5. Linear equation in one variable has

(a) only one variable with any power.

(b) only one term with a variable.

c) only one variable with power 1.

6. The shifting of a number from one side of an equation to other is called
(c) transposition (b) distributivity (c) commutativity (d) associativity.

SOLVE THE FOLLOWING

8. $17 (2-x) – 5 (x+ 12) = 8 (1 – 7x)$

9. $3x + 2 = 8 (2x-3)$

10.

$$\frac{x+6}{4}+\frac{x-3}{5}=\frac{5x-4}{8}$$

11. $2(x+2)+5(x+5) =4(x-8) +2(x-2)$

12. $3(2x-3) =4(2x+4)$

13. $\frac{2}{3}x+1=\frac{7}{3}$

14. $$\frac{2y-3}{4}-\frac{3y-5}{2}=y+\frac{3}{4}$$

15. $$0.25\,(4x-5) = 0.75x + 8$$

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CHAPTER – 3 - UNDERSTANDING QUADRILATERALS

1. **Which of the following quadrilaterals not has two pairs of adjacent sides equal and its diagonals intersect at 90 degrees?**

   A. Square, B. Kite, C. Rhombus, D. Rectangle

2. **The quadrilateral whose diagonals are perpendicular to each other is:**

   A. Parallelogram, B. Rectangle, C. Trapezium, D. Rhombus

3. **Which one of the following is a regular quadrilateral?**

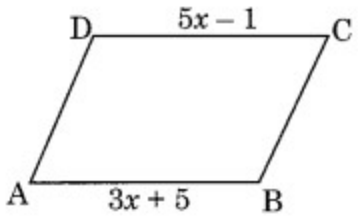
   A. Square, B. Trapezium, C. Kite, D. Rectangle

4. **The perimeter of a parallelogram whose parallel sides have lengths equal to 14 cm and 9 cm is _____**

5. **If ∠A and ∠B are two adjacent angles of a parallelogram. If ∠A = 70°, then ∠B =**
6. **ABCD is a rectangle and AC & BD are its diagonals. If AC = 10 cm, then BD is _____**

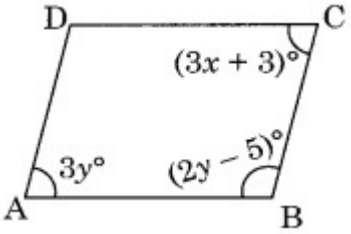
7. **Each of the angles of a square is a _____**

8. **In the given figure, ABCD is a parallelogram. Find x.**



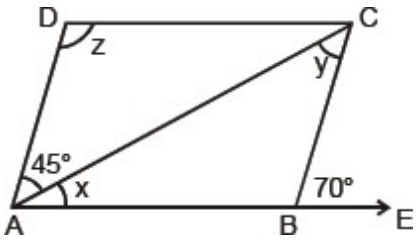
9. **Find the number of sides of a regular polygon if the measure of an exterior angle is 36°.**
10. **The adjacent angles of a parallelogram are in the ratio of 3:7. Find the measure of each angle**.
11. **Find the measure of an interior angle of a regular polygon of 9 sides.**
12. **The opposite angles of a parallelogram are (3x + 10) ° and (2x +50) °. Find the measure of four angles.**

13. **In the given parallelogram ABCD, find the value of x and y.**



14. **ABCD is a rectangle whose diagonals meet at O. If OA = 2x and OD = 6x – 8, find x. Also find the lengths of the diagonals AC and BD.**

15. **Find the values of x, y and z in the following figure.**



INTERNATIONAL INDIAN SCHOOL DAMMAM

Revision Worksheet (2023-24)

Class-8 **Chapter:1Rational Numbers** **Subject- Mathematics**

Choose the correct answer (MCQS)

1. **A rational number can be represented in the form of:**
   A. p/q B. pq C. p+q D. p-q
2. **The associative property is applicable to:**
   A. Addition and subtraction B. Multiplication and division
   C. Addition and Multiplication D. Subtraction and Division
3. **Division of rational numbers is associative.**
   A. True B. False
4. Which of the following statements is true?
   (a) Natural numbers are associative for division.
   (b) Whole numbers are associative for division.
   (c) Integers are associative for division.
   (d) Rational numbers are not associative for division.
5. Which of the following is the multiplicative identity for rational numbers?
   (a) 1 (b) -1 (c) 0 (d) None of these
6. The additive identity for rational numbers is
   (a) 1 (b) -1 (c) 0 (d) None of these
7. Which of the following is the product of (−7/8) and (2/21)
   (a) 12 (b) −63/16 (c) −16/147 (d) −1/12
8. **How many rational numbers are there in between ¾ and 1?**
   A. 0 B. 1 C. 2 D. Countless
9. **Assertion (A) – ½ of 2 is a rational number**

Reason (R) – a rational number is a type of real numbers, which is in the form of p/q where q is not equal to zero

   a) Both A and R are true and R is the correct explanation of A
   b) Both A and R are true but R is not the correct explanation of A
   c) A is true but R is false
   d) A is false but R is true

10. **Assertion (A) – 0 is not a rational number**

Reason (R) – a rational number is a type of real numbers, which is in the form of p/q where q is not equal to zero.

   a) Both A and R are true and R is the correct explanation of A
   b) Both A and R are true but R is not the correct explanation of A
   c) A is true but R is false
   d) A is false but R is true

Class-8 **Chapter: 2 Linear Equation in One Variable**

1. **Which of the following is not a linear equation in one variable?**
   A. 33z+5 = 0 B. 33(x+y) = 0 C. 33x+5 = 0 D. 33y+5 = 0
2. **The solution of 2y + 9 = 4 is:**
   A. 9/2 B. 4/9 C. -⅖ D. -5/2

3. **The solution for 3m = 5m – (8/5) is:**

A. 8/5 B. ⅘ C. 5/4 D. 4/3

4. **Simplifying the flowing linear education: 4 (t – 4) = 5 (2t – 5)**

(a) 3/2 (b) 5/2 (c) 9/2 (d) 7/1

5. **Solve, 3x – 4 = 5x – 10**

(a) 2 (b) 5 (c) 4 (d) 3

6. **Solve 3y + 3/5 = 27/5 – y**

(a) 2/5 (b) 21/4 (c) 27/8 (d) 21/20

7. **Solve, (x-7)/3 = (x-3)/7**

(a) 42 (b) 50 (c) 40 (d) 30

8 The solution of the equation 3x = 20/7 – x is

(a) 10 (b) 20/21 **(c)** – 5/7 **(d)** 5/7

9. **Assertion (A) – The solution of the equation 5/x = 2 is 2/5.**

Reason (R) – The value of the variable which makes left hand side equal to right hand side in the given equation is called the solution of the equation

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

10. **Assertion (A) – The value of ' y' in the equation 3y + 4 = 5y – 4 is 4**

Reason (R) – The value of the variable which makes left hand side equal to right hand side in the given equation is called the solution of the equation

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

CHAPTER:3 UNDERSTANDING QUADRILATERALS

CLASS: VIII

1

What is the name of a regular polygon of 3 sides ?

(a) Equilateral triangle

(b) Square

(c) Regular hexagon

(d) Regular octagon.

.

2.

The sum of the measures of the exterior angles of any polygon is

(a) 90°

(b) 180°

(c) 360°

(d) 720°.

3.

The measures of each of the four angles of a quadrilateral are equal. Find the measure of each angle.

(a) 45°

(b) 30°

(c) 60°

(d) 90°.

4.

Two adjacent angles of a quadrilateral measure 130° and 40°. The sum of the remaining two angles is

(a) 190°

(b) 180°

(c) 360°

(d) 90°.

5.

The number of sides of a regular polygon, whose each exterior angle has a measure of 45°, is

(a) 4

(b) 6

(c) 8

(d) 10.

6.

How many sides does a-regular polygon have if each of its interior angles is 165° ?

(a) 12

(b) 24

(c) 9

(d) 6.

7.

In a regular polygon of n sides, the measure of each internal angle is

(a) $\frac{360^\circ}{n}$

(b) $(\frac{2n-4}{n})$ 90°

(c) n 90°

(d) 2n right angles.

8.

Assertion: Diagonals of a rhombus bisect each other.

Reason: Even rhombus is a parallelogram and diagonals of parallelogram bisect each other.

a.) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

b.) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

c.) assertion is true but the reason is false.

d.) both assertion and reason are false

9.Assertion: The adjacent angles in a parallelogram are supplementary.

Reason: In a parallelogram the adjacent angles are always equal.

a.) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

b.) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

c.) assertion is true but the reason is false.

d.) both assertion and reason are false

10.Assertion: The measure of each angle of a regular hexagon is 120∘120∘

Reason: Sum of all interior angles of a polygon of n sides is (n-2) right angles.

a.) Both Assertion and Reason are correct and Reason is the correct explanation for Assertion

b.) Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

c.) assertion is true but the reason is false.

d.) both assertion and reason are false

CLASS 8 DATA HANDLING SUB: MATHS

CHOOSE THE CORRECT OPTION:-

1) If a coin is flipped in the air, what is the probability of getting a tail?

a) 0 b) 1/2 c) 1 d) 2

2) A bag has 4 red balls and 4 green balls, what is the probability of getting a red ball randomly?

a) 1/4 b) 1/8 c) 1/2 d) 0

3) A _____is one whose outcome cannot be predicted exactly in advance.

a) event b) frequency c) random experiment d) pie chart

4) When a die is thrown, what is the probability of getting even prime number?

a) 1/6 b) 1/2 c) 1/3 d) 1/5

5) Numbers 1 to 10 are written on ten flashcards and mixed well. One flash card is taken from the box without looking into it. What is the probability of getting 1-digit number?

(a) 1 b) 1/9 c) 1/10 d) 9/10

6) The pie-chart is divided into

(a) circles b) squares c) sectors d) segments

7) *A geometric representation showing* the relationship between a whole and its parts, is _____.

a) Histogram b) Pie chart c) Bar graph d) Pictograph

8) Assertion (A): When a die is thrown, the probability of getting a number greater than 6 is one.

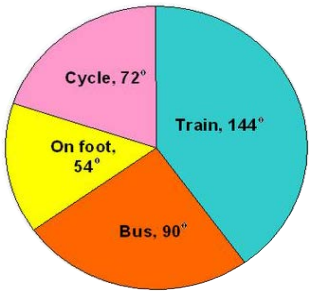
Reason (R): The probability of an impossible event is zero.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true



9) Assertion (A): In the experiment of throwing a dice once, getting 1, 2, 3, 4, 5 and 6 is an event

Reason (R): Each outcome or collection of outcomes of an experiment is called an event.

a) Both A and R are true and R is the correct explanation of A

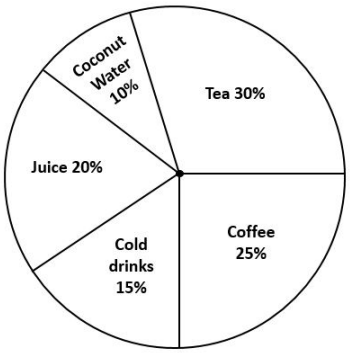
b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

CASE - BASED STUDY:-

I) In the summer, a survey was conducted among some people about their favourite drinks. The following pie chart shows the data.



Based on the above data, answer the following questions.

i) If 300 people like coffee, how many people were surveyed?

ii) How many more people like tea than cold drinks?

iii) Find the central angle in the pie chart for the people who like juice?

iv) Find the total number of people who like juice and coconut water?

II) There are 1000 workers who travel from home to factory:

The pie-graph shows the proportion of workers using various mode for traveling to work.

Study the pie-graph and answer the questions given below: How many workers travel to factory

i) by bus (ii) by train (iii) by cycle (iv) on foot

III) When a die is thrown, what is the probability of getting:

(i) a prime number
(ii) a number greater than 1
(iii) a number between 3 and 6
(iv) a composite number

IV) A glass jar contains 6 red, 5 green, 4 blue and 5 yellow marbles of same size. Hari takes out a marble from the jar at random. What is the probability that the chosen marble is of:

(i) red colour
(ii) yellow
(iii) green
(iv) not red

Class-8 **Chapter:6 Square and Square Roots** **Subject- Mathematics**

Choose the correct answer (MCQS)

1. **How many natural numbers lie between 9^2 and 10^2?**
A. 17 B. 18 C. 19 D. 20

2. **What is the sum of the first four odd natural numbers?**
A. 16 B. 17 C. 18 D. 20

3. **What will be the unit digit of square of 35789?**
A. 1 B. 9 C. 3 D. 8

4. **What is the length of side of a square, if the area of square is 441 cm^2?**
A. 21 cm B. 29 cm C. 31 cm D. 39 cm

5. **Which of the following is a perfect square?**
A. 1057 B. 625 C. 7928 D. 64000

6. Which of 225^2, 97^2, 53^2 and 809^2 would end with digit 1.
(a) 225^2 (b) 97^2 (c) 53^2 (d) 809^2

7. What will be the number of zeros in the square of the number 7000?
(a) 3 (b) 5 (c) 6 (d) 9

8. **The square root of 6400 is**
(a) 80 (b) 81 (c) 32 (d) 23

9. The number of digits in the square root of 78400 is ……
(a) 1 (b) 2 (c) 3 (d) 4

10. **Assertion (A) – nonsquare numbers lie between the pair of numbers 80^2 and 81^2 are 160.**
Reasons (R) –squares of 12 and 13 and then subtract square of 12 from square of 13, we get numbers of non-square numbers

a) Both A and R are true and R is the correct explanation of A
b) Both A and R are true but R is not the correct explanation of A
c) A is true but R is false
d) A is false but R is true

Class-8 **Chapter:7 Cube and Cube Roots** **Subject- Mathematics**

MCQ (CHOOSE THE CORRECT ANSWER):

1. The one's digit of the cube of 53 is:

(A) 9 (B) 3 (C) 7 (D) 1

2. The prime factorisation of 64 is:

(A) 2 x 2 x 2 (B) 4 x 4 x 4 (C) 8 x 8 x 8 (D) None of the above

3. Find the smallest number by which the number 200 must be multiplied to obtain a perfect cube.

(A) 2 (B) 5 (C) 10 (D) 100

4. The cube of 23 is:

(A) 2304 (B) 12167 (C) 529 (D) 23

5. When the square of a number is subtracted from the cube of the same number, it becomes 100. Find the number.

(A) 2 (B) 1 (C) 4 (D) 5

6. Which of these numbers is not a cube number?

(A) 10000 (B) 343 (C) 729 (D) 64

7. Which of the following is correct?

(A) Cube of a negative number is always positive.

(B). Cube of a negative number is always negative.

(C). Cube of a negative number may be positive or negative.

(D). All of the above

8. If the digit in one's place of a number is 6, then the last digit of its cube will be: (A) 6 (B) 3 (C) 2 (D) 8

9. Which of the following is equal to its own cube?

(A) 1 (B) 3 (C) 2 (D) 9

10. Which symbol represents cube root of x?

(A) x^2 (B) x^3 (C) $\sqrt[3]{x}$ (D) $\sqrt{x}$

11. What is cube root of 389017?

(A) 73 (B) 75 (C) 77 (D) 79

ASSERTION REASONING QUESTIONS:

12. Assertion (A) –1000 is a perfect cube

Reasons (R) –The perfect cube is the result of multiplying the same integer three times.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

13. Assertion (A) –27 is a cube number

Reasons (R) –A cube number is a number multiplied by itself 3 times

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

14. Assertion(A) -The cube of the number 12 is 1728
Reason(R)- if a number has 2 in its ones place, its cube has 8 in the place.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

MATHEMATICS

CLASS VIII

ASSERTION AND REASONING QUESTIONS

CHAPTER -1 RATIONAL NUMBERS

1) **Assertion (A) – 0 is not a rational number**

Reason (R) – a rational number is a type of real numbers, which is in the form of p/q where q is not equal to zero.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

2) Assertion (A) – Rational numbers are not closed under multiplication

Reason (R) – A rational number is a number that is in the form of p/q, where p and q are integers, and q is not equal to 0.

a) Both A and R are true and R is the correct explanation of A

b) Both A and R are true but R is not the correct explanation of A

c) A is true but R is false

d) A is false but R is true

Chapter 2 Linear Equations in One Variable

Assertion and Reasoning Questions

1. Assertion: 3x+4 = 10 + x is a linear equation.

Reason: 4 added to three times of a number is the number more than 10, it is a statement of the linear equation.

(a) If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

(c) If Assertion is correct but Reason is incorrect.

(d) If Assertion is incorrect but Reason is correct.

Answer: (a)

2. Assertion: 4x+x = 2 is a linear equation.

Reason: Solution of the equation is -2.

(a) If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

(c) If Assertion is correct but Reason is incorrect.

(d) If Assertion is incorrect but Reason is correct.

Answer (c)

3. Assertion: The length and breadth of a rectangle are x + 4 and x respectively if area of the rectangle is 140. Length and breadth may will get 14cm and 10 cm respectively.

Reason: Area of rectangle Length x Breadth.

(a) If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.

(b) If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.

(c) If Assertion is correct but Reason is incorrect.

(d) If Assertion is incorrect but Reason is correct.

Answer (a)

MATHEMATICS

CLASS VIII

CASE STUDY QUESTIONS

CHAPTER – 3 – UNDERSTANDING QUADRILATERALS

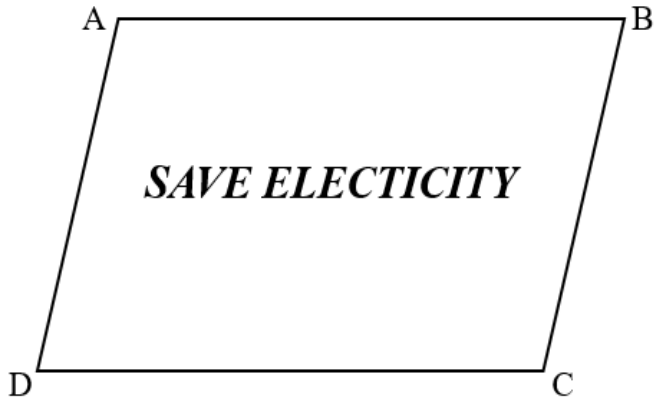
1. Rita has a rectangular lawn ABCD in the back yard of her house. P, Q, R and S are respectively the mid points of the sides AB, BC, CD and DA. P, Q, R and S are joined to form a quadrilateral PQRS, in which she wishes to grow beautiful flowers.

   a) What can you say about the diagonals of lawn ABCD?
      i) They are perpendicular to each other.
      ii) They bisect each other.
      iii) They are perpendicular bisectors of each other.
      iv) They are equal and bisect each other
   b) Name the quadrilateral formed when P, Q, R and S are joined.
      i) Rectangle
      ii) Rhombus
      iii) Parallelogram
      iv) Square
   c) If AB = 12 m and BC = 16 m, then the length of AC is ___
      i) 15 m
      ii) 16m
      iii) 20m
      iv) 24m

OR

   d) What is the length of each side of the quadrilateral PQRS?
      i) 8m
      ii) 10m
      iii) 12m
      iv) 16m.

2. Raju makes a poster in the shape od a parallelogram on the topic SAVE ELECTRICITY for an interschool competition as shown in the figure. Based on this answer the following questions.



a) The opposite sides of a parallelogram are
   i) equal,
   ii) unequal
   iii) curves
   iv) bisectors

b) The adjacent angles of a parallelogram are
   i) acute
   ii) equal
   iii) supplementary
   iv) complementary

c) If $< A = (4x + 3)°$ and $< D = (5x – 3)°$, then find the measure of $< B$.
   i) 83°
   ii) 97°
   iii) 76°
   iv) 43°

OR

d) If $< B = 2y°$ and $< D = (3y – 6)°$, then find the value of y.
   i) 3
   ii) 2
   iii) 6
   iv) 5

MATHEMATICS

CLASS VIII

CASE STUDY QUESTIONS

CHAPTER 6 - SQUARES AND SQUARE ROOTS

1) Ramu, the farmer, grows different varieties of fruits and vegetables in his farm. Every morning, he brings them to the market to sell . He bought a new square field of side 42 m. He decided to divide his new field among his four sons in to four equal square fields.

a) What is the area of square field bought by Ramu ? (1 Mark)
b) What is the area of each square field after dividing among Ramu's sons ? (1 Mark)
c) What is the length of side of each square field ? (Use division method) (2 Mark)

OR

d) What is the length of side of each square field? (use prime factorisation method) (2Mark)

2) Meenu is studying in grade 8. Her mother is planning to start a garden centre.She ordered 1296 rose plants , 625 Marigold plants and 324 sunflower plants. She told Meenu to help in arranging plants in the garden. Each plant should be arranged in rows where number of rows equal to number of columns.

a) In how many rows she can plant rose plants ?(1 Mark)
b) In how many rows she can plant Marigold plants ?(1 Mark)
c) Total how many rows will be there when she complete planting all plants ?(2 Mark)

MATHEMATICS

CLASS VIII

CASE STUDY QUESTIONS

CHAPTER -5: DATA HANDLING

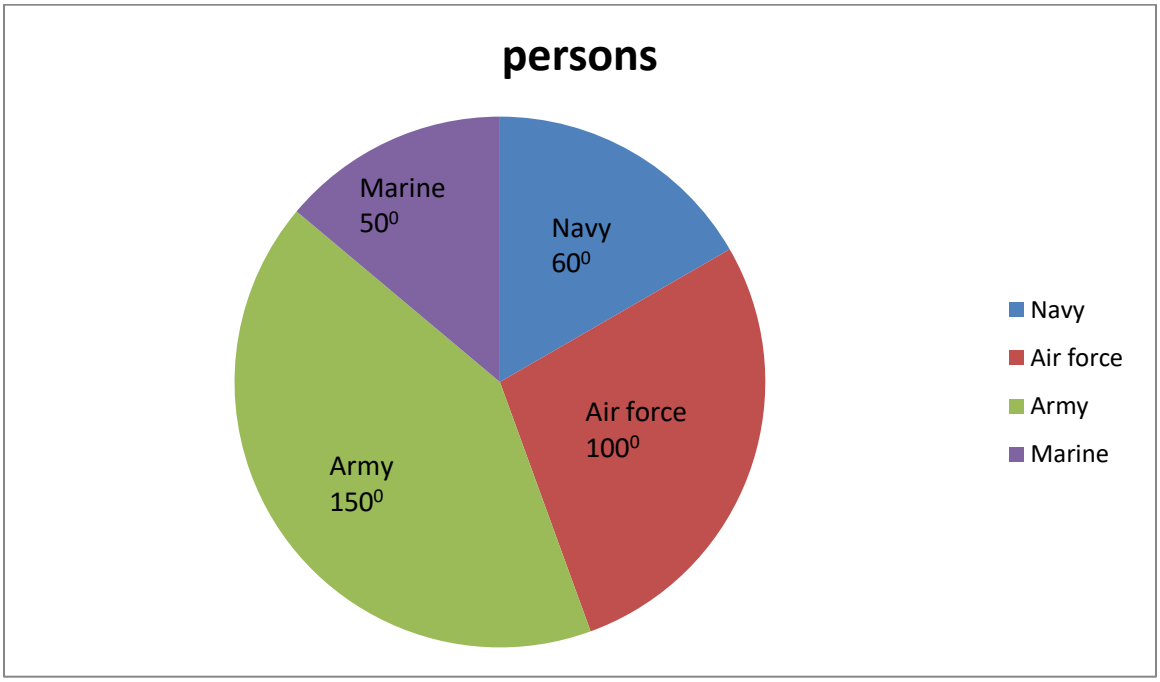
1. A teen- aged boy Praveen asked his father to buy a bike for him. His father is not in favour of buying a bike for his son. The father thought for a while and answered that he has to read the newspaper and check the road accidents that occur everyday. If there is no accident news any day, that day he will buy a bike for him. Praveen prepared a chart of the daily accidents in a week as shown below.

	bike	car	bus
Sunday	15	4	1
Monday	12	3	0
Tuesday	14	3	1
Thursday	13	2	0
Friday	11	2	1
Saturday	14	2	0
Total			

Answer to the following questions

1. Probability of bike accident on Sunday in a week? (1 Mark)
2. Probability of car accident on Sunday in a week? (1 Mark)
3. Probability of bus accident on Sunday in a week? Which vehicle can be used for safe journey?(1+1=2 Marks)

2. Nine hundred men volunteered for joining the armed force. The pie-graph represents the proportion of men in the different armed services. Study the pie graph and answer the questions given below:



1. Find how many men volunteered for each service? (2 Marks)
2. What percent of the men volunteered to join Navy force?(1 mark)
3. What percent of the men volunteered to join Marine force? (1 mark)

3.John is playing a board game with his friends. In the game, they need to roll a fair dice to move their game pieces. John is excited because he knows that rolling certain numbers will give him special advantages. Rolling an even number will allow him to move forward two spaces, while rolling an odd number will only allow him to move forward one space.

Question:

1)What is the probability that John rolls an odd number?

2) what is the probability of getting even numbers?

3) What is the probability of getting odd prime numbers?