

CHAPTER 1

A. In a competitive exam there are 100 questions. 2 marks are awarded for each correct answer, 0 is awarded for non-attempted questions and -1 is awarded for a wrong answer.

1. Raju got 60 answers correct out of his total attempted questions. What is his score for the correct answers?
a. 60 b. 100 c. 120 d. 30
2. Raju has not attempted 5 questions. How many marks does he get for the wrong answers?
a. -5 b. -60 c. -50 d. -35
3. What are the total marks obtained by Raju?
a. 85 b. -85 c. 155 d. -155
4. What is the least and highest score that a student can get in this exam?
a. 0 and 200 b. -100 and 0
c. -100 and 200 d. 0 and 100
5. In the same exam, Aarti attempted 90 questions out of which 65 are correct and the rest are wrong. What is her total score?
a. 130 b. 105 c. 155 d. 15

B. Ekta and Mamta are studying the properties of different mathematical operations on integers. It's time to put their knowledge to the test.

1. Which property of addition is used in the given equation?
 $14 + \{(-30) + 16\} = \{14 + 16\} + (-30)$
a. Closure property b. Commutative property
c. Associative property d. Existence of additive inverse
2. Which property of subtraction is used in the equation $1578 - 0 = 1578$?
a. Subtraction property of zero b. Commutative property
c. Closure property d. Associative property
3. Which property of multiplication is most useful in solving $68 \times [(-45) + (-68)]$?
a. Associative property
b. Distributive property of multiplication of integers over addition
c. Closure property
d. Commutative property

4. Fill in the blank and name the property used. $\text{_____} \times \frac{1}{-6475} = 1$
- 6475; Existence of multiplicative inverse
 - 6475; Existence of multiplicative inverse
 - 6475; Existence of multiplicative identity
 - 6475; Existence of multiplicative identity
5. Which of the following properties hold true for division of integers?
- Closure property
 - Commutative property
 - Associative property
 - None of these

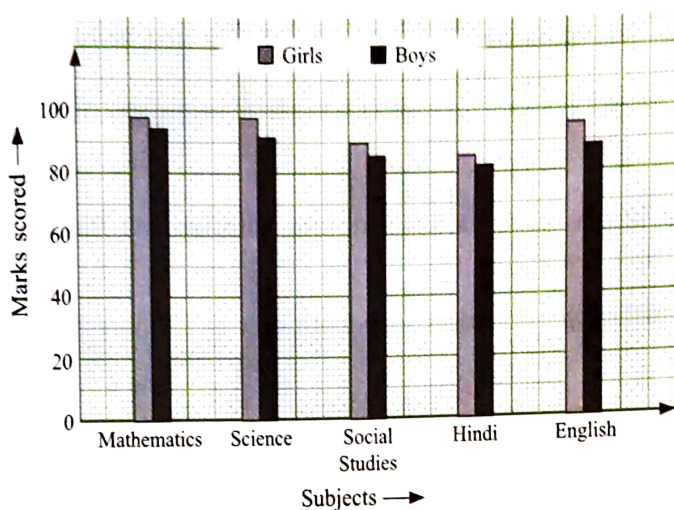
CHAPTER 2

- A. A piece of cloth is 100 m long. Rahul cut $13\frac{1}{2}$ m, Suhana cut $10\frac{3}{5}$ m, Manisha cut $37\frac{5}{7}$ m and Aryan cut $29\frac{4}{5}$ m from the cloth piece.
- Who has the longest and shortest cloth piece?
 - Suhana and Manisha respectively
 - Manisha and Rahul respectively
 - Manisha and Suhana respectively
 - Suhana and Aryan respectively
 - What is the length of the remaining cloth piece?
 - $8\frac{27}{70}$ m
 - $7\frac{43}{70}$ m
 - $5\frac{2}{48}$ m
 - 0 m
 - How much cloth piece should be added to the piece of Rahul to get the length of Aryan's cloth piece?
 - $43\frac{3}{10}$ m
 - $13\frac{1}{2}$ m
 - $24\frac{1}{10}$ m
 - $16\frac{3}{10}$ m
 - What is the area of the cloth if it is $1\frac{1}{12}$ m wide?
 - $108\frac{1}{3}$ sq. m
 - $100\frac{7}{12}$ sq. m
 - $108\frac{2}{3}$ sq. m
 - $1\frac{7}{12}$ sq. m
 - If the total cloth is to be divided equally among 8 people, how much would each person get?
 - 12 m
 - $12\frac{1}{2}$ m
 - 8 m
 - 10 m
- B. Look at the list of grocery prices at a supermarket and answer the questions.
- | | | |
|-----------------------|-------------------------------|-------------------------|
| Rice @ ₹57.89 per kg | Milk @ ₹25.76 per 0.5 L | Bread @ ₹13.88 per loaf |
| Sugar @ ₹40.39 per kg | Cleaning cloth @ ₹40.35 per m | |
- What is the price of 18 kg of rice?
 - ₹104.202
 - ₹1042.02
 - ₹104202
 - ₹10.42
 - What is the total price of 3.75 L milk and 3 loaves of bread?
 - ₹234.84
 - ₹193.20
 - ₹41.64
 - ₹138.24
 - How much cleaning cloth can be purchased for ₹60.525?
 - 1.35 m
 - 2.5 m
 - 2 m
 - 1.5 m

4. What is the price of 2.7 kg of sugar?
 a. ₹55 b. ₹109.053 c. ₹550.53 d. ₹108.945
5. What is the total cost of 2.5 kg rice, 2.5 L milk and 2 m cleaning cloth?
 a. ₹289.825 b. ₹348.75 c. ₹354.225 d. ₹296.185

CHAPTER 3

A. Study the following double bar graph and answer the questions.



1. Who scored more in Social Studies?
 a. Boys b. Girls
 c. Both scored equally. d. None of these.
 2. Who scored more in Hindi?
 a. Boys b. Girls c. Both scored equally d. None of these
 3. In which subject boys scored more than girls?
 a. English b. Science
 c. Mathematics d. None of these
 4. What is the ratio of the score of boys to the score of girls in Mathematics?
 a. 47:49 b. 94:89 c. 49:48 d. 89:94
 5. What is the mean score of boys in all the subjects?
 a. 89.2 b. 88.4 c. 88.5 d. 88.8
- B. Sahil and Sushant are playing cricket. They tossed a coin to check who bats first.
1. Which of the following is a possible event while tossing a coin?
 a. Getting one head b. Getting two hearts
 c. Getting three tails d. Getting a six
 2. If Sahil tossed the coin 21 times and got head 16 times, find the probability of getting a head.
 a. $\frac{21}{16}$ b. $\frac{1}{16}$ c. $\frac{16}{21}$ d. $\frac{1}{21}$

3. If Sushant tossed the coin 38 times and got tails 21 times, find the probability of getting a head.
 - a. $\frac{21}{38}$
 - b. $\frac{38}{21}$
 - c. $\frac{1}{38}$
 - d. $\frac{17}{38}$
4. If Sushant can hit 5 sixes in every 40 balls, find the probability of not hitting a six on any given ball.
 - a. $\frac{1}{8}$
 - b. $\frac{1}{5}$
 - c. $\frac{7}{8}$
 - d. $\frac{1}{40}$
5. Sahil is a great bowler. In the last match, he got a wicket in every 18 balls. Find the probability of Sahil taking Sushant's wicket on the very first ball of the match.
 - a. 0
 - b. $\frac{1}{18}$
 - c. 1
 - d. $\frac{1}{6}$

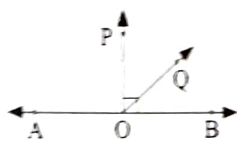
CHAPTER 4

- A. A linear equation in one variable has a unique solution but for a given solution, we can have multiple equations.
 1. Which of these satisfies the statement 'one-tenth of x is 10 more than 6'?
 - a. $\frac{1}{10}x - 6 = 10$
 - b. $\frac{1}{10}x \times 10 = 6$
 - c. $\frac{1}{10} - 6x = 10$
 - d. $\frac{1}{10} - 10x = 6$
 2. $x = -1$ is the solution of which of the given linear equation?
 - a. $2x - 1 = 3$
 - b. $3x + 5 = 2$
 - c. $4x + 2 = -6$
 - d. $x + 3 = 0$
 3. Which of the following statement satisfies the equation $\frac{x}{6} + 9 = 2$?
 - a. 6 times x is 2 more than 9.
 - b. The result of dividing x by 6, and then adding 9 to the quotient, equals 2.
 - c. One-sixth of x added to 9 gives 2.
 - d. Both (b) and (c)
 4. Alka has twice as many apples as her friend Ekta. If Ekta gives 5 apples to Alka, the number of apples Alka now has is 49. Which statement satisfies the given case? (Hint: Take initial number of apples Ekta has as x .)
 - a. $x + 5 = 49$
 - b. $2x - 5 = 49$
 - c. $2x + 5 = 49$
 - d. $2x - 49 = 5$
 5. What is the value of x which satisfies the above equation?
 - a. 22
 - b. 21
 - c. 23
 - d. 43
- B. The sum of the digits of a two digit number is 9. If 9 is subtracted from the number, its digits are interchanged. Assume number at unit's digit be x .
 1. What is the number in terms of x ?
 - a. $90 + 9x$
 - b. $90 - 9x$
 - c. $9x - 90$
 - d. $90 - 10x$
 2. What is the number with interchanged digits?
 - a. $9x - 9$
 - b. $9 - 9x$
 - c. $18 - 9x$
 - d. $9x + 9$

3. What is the equation representing the problem?
 - a. $90 - 9x - 9 = 9x - 9$
 - b. $90 - 9x + 9 = 9x - 9$
 - c. $90 - 9x - 9 = 9x + 9$
 - d. $90 - 9x + 9 = 9x + 9$
4. What is the digit at tens place?
 - a. 4
 - b. 3
 - c. 5
 - d. 9
5. What is the number?
 - a. 99
 - b. 9
 - c. 54
 - d. 45

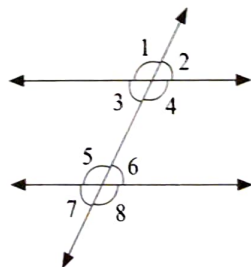
CHAPTER 5

A. Mahesh draws the following figure, where AOB is a straight line and $\angle POB$ is 90° .



1. Choose the correct linear pair from the following.
 - a. $\angle AOQ$ and $\angle POB$
 - b. $\angle AOB$ and $\angle POB$
 - c. $\angle AOP$ and $\angle POQ$
 - d. $\angle AOQ$ and $\angle QOB$
2. Which pair of the angles are complementary?
 - a. $\angle POQ$ and $\angle QOB$
 - b. $\angle AOQ$ and $\angle POB$
 - c. $\angle AOP$ and $\angle POB$
 - d. $\angle POQ$ and $\angle AOP$
3. Identify the pair of adjacent angles from the following.
 - a. $\angle AOQ$ and $\angle POB$
 - b. $\angle AOP$ and $\angle QOP$
 - c. $\angle POQ$ and $\angle QOB$
 - d. Both (b) and (c)
4. Which angle is supplement to $\angle QOB$?
 - a. $\angle QOP$
 - b. $\angle AOQ$
 - c. $\angle POB$
 - d. $\angle POQ$
5. Find $\angle AOQ$ and $\angle QOB$ respectively, if $\angle AOQ$ is three times $\angle QOB$.
 - a. 45° and 90°
 - b. 90° and 90°
 - c. 135° and 45°
 - d. 45° and 135°

B. Mahesh again draws a figure. This time he has drawn two parallel lines intersected by a transversal. He made $\angle 2 = 60^\circ$.

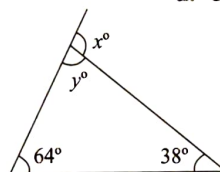


1. Which angle equals $\angle 2$?
 - a. $\angle 8$
 - b. $\angle 5$
 - c. $\angle 1$
 - d. $\angle 6$
2. Which of the following is a pair of alternate interior angles?
 - a. $\angle 1$ and $\angle 4$
 - b. $\angle 3$ and $\angle 4$
 - c. $\angle 4$ and $\angle 5$
 - d. $\angle 2$ and $\angle 7$
3. Which of the following is a pair of corresponding angles?
 - a. $\angle 1$ and $\angle 5$
 - b. $\angle 2$ and $\angle 3$
 - c. $\angle 4$ and $\angle 6$
 - d. $\angle 2$ and $\angle 8$

4. The measure of $\angle 3$ is
 - a. 60° .
 - b. 30° .
 - c. 120° .
 - d. 90° .
5. The measure of $\angle 7$ is
 - a. 60° .
 - b. 30° .
 - c. 120° .
 - d. 90° .

CHAPTER 6

- A. In a triangle, the sum of all the angles is equal to 180° . Also, the sum of any two sides of a triangle should be greater than the third side. Now, answer these questions.
1. Which of the following can be the angles of a triangle?
 - a. 30° , 60° and 100°
 - b. 40° , 40° and 40°
 - c. 35° , 55° and 90°
 - d. 25° , 55° and 65°
 2. Which of the following can be the sides of a triangle?
 - a. 4 m, 10 m and 5 m
 - b. 3 m, 4 m and 5 m
 - c. 6 m, 10 m and 4 m
 - d. 5 m, 10 m and 2 m
 3. One of the exterior angles of a triangle is 72° and the interior angles are equal to each other. The measure of each of these equal angles is
 - a. 60° .
 - b. 24° .
 - c. 36° .
 - d. 12° .
 4. Angles of a triangle are in the ratio of 2:3:5. Find the largest angle in the triangle.
 - a. 18°
 - b. 54°
 - c. 90°
 - d. 36°
 5. Find x and y respectively in the given figure.



- B. Anuj lives on 2nd floor which is 7 m high and Kunal lives on 5th floor which is 13 m high. Both live in different buildings which are 8 m apart.
1. Which of the following theorems/properties gives the relation between three sides of a right-angled triangle?
 - a. Exterior angle property
 - b. Angle sum property
 - c. Triangle inequality property
 - d. Pythagoras theorem
 2. Which of the following can be the sides of a right-angled triangle?
 - a. 3 m, 4 m and 6 m
 - b. 3 m, 5 m and 13 m
 - c. 5 m, 12 m and 13 m
 - d. 8 m, 6 m and 5 m
 3. If 3 m and 5 m are the sides of a right-angled triangle, find the measure of third side.
 - a. 4 m
 - b. 6 m
 - c. 3 m
 - d. 8 m
 4. Which of the following can be the sides of a right-angled triangle?
 - a. 3 m, 8 m and 4 m
 - b. 8 m, 15 m and 17 m
 - c. 5 m, 10 m and 12 m
 - d. 7 m, 12 m and 13 m
 5. Find the length of a rope which can connect the two floors of Anuj and Kunal.
 - a. 8 m
 - b. 13 m
 - c. 10 m
 - d. 20 m