



ALGEBRA

Q1 If the perimeter of a regular hexagon is x metres, then the length of each of its sides is

- (a) $(x + 6)$ metres
- (b) $(x \div 6)$ metres
- (c) $(x - 6)$ metres
- (d) $(6 \div x)$ metres

Q2 Savitri has a sum of ₹ z . Out of which she spent ₹ 1000 on groceries, ₹500 on clothes. How much money is left with her?

Q3 Rahul covered distance from his college to his home by auto rickshaw. An auto rickshaw charges ₹ 10 for each kilometre . find the total charges for d kilometres .

Q4 How many sticks will be used to make the alphabet E ?

Q5 Shyam has x pens. Ram has 15 more pens than Shyam. How many pens does Ram have ?

Q6 Amit's present age is x years .

- a) If his sister is 3 years younger than him. Then find his sister's age?
- b) What will be the age of Amit after 10 years?
- c) If his father is twice of his age, then find his father's age?

CASE STUDY BASED QUESTION

Q7 Sarah buys books from a dealer for her bookstall. She buys 20 comic books, 15 storybooks and 10 colouring books. A comic book costs ₹ x . A storybook costs ₹5 more than a comic book and a colouring book costs ₹5 less than a story book.



Based on the above information answer the following questions:

- (i) Write the expression that shows the total cost of the comic books.
- (ii) Write the expression that shows the total cost of the story books.
- (iii) Write the expression that shows the total cost of the colouring books.

RATIO AND PROPORTION

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Q1 The ratio of one dozen to one score is _____.

- a) 5:3 b) 2:3 c) 3:2 d) 3:5

Q2. The cost of six chocolates is ₹60, then the cost of four chocolates is _____.

- a) ₹90 b) ₹120 c) ₹40 d) ₹100

Q3 Express the Ratio in the simplest form.

45 minutes to 4 hours.

Q4 Check whether the following ratios are in proportion or not.

8m:21m and Rs.24: Rs63

Also write its middle terms and extreme terms.

Q5 Manoj's weight is 36kg. His brother's weight is 2kg more than him. Find the Ratio of weight of Manoj's brother to Manoj.

Q6 Out of the 72 persons working in an office, 28 are men and the remaining are women. Find the ratio of the number of:

- (i) men to women,
- (ii) men to the total number of persons
- (iii) Total number of persons to women.

CASE STUDY BASED QUESTION

Q7 Arun earns ₹390000 per year. Out of which he spends 2,60,000 per year and he saves rest of the money.

- a) Find his earnings for 1 month.
- b) How much he earns in 5 months?
- c) Find his savings for 25 weeks.

Q8 . Rahul bought rice and wheat from a shop. Cost of 5 kg of wheat is ₹ 1050.

- (a) What will be the cost of 1 kg of wheat?
- (b) What will be the cost of 8 kg of wheat?
- (c) What quantity of wheat can be purchased in ₹ 630?



INTEGERS

Q1. $(-4) + (+3) =$ _____

- (a) 7 (b) -1 (c) 6 (d) 0

Q2. Sum of two negative numbers is always

- (a) 0 (b) 1 (c) positive (d) negative

Q3. (a) Write four negative integers which are greater than -20 .

(b) Write four negative integers which are less than -10 .

Q4. The sum of the two integers is -38 . If one of the integer is 240 . Find the other.

Q5. A class test contained 25 questions, 4 marks are given to students for each correct answer, and (2) marks are given for every wrong answer. A student attempts all questions and 20 of his answers are correct. What is the total score given to the student?

Q6. Solve the following terms:

(a) $50 - (-40) - (-2)$

(b) $(-331) + (-237) + (+115)$

UNDERSTANDING ELEMENTARY SHAPES

Q1 What is the measure of – (i) a right angle? (ii) a straight angle?

Q2 Name the types of the following triangles –

(i) Triangle with lengths of the sides 7 cm, 8 cm and 9 cm.

(ii) Triangle ABC with sides $AB = 8.7$ cm, $AC = 7$ cm and $BC = 6$ cm.

(iii) Triangle PQR such that side $PQ = QR = PR = 5$ cm.

(iv) Triangle DEF with $\angle D = 90^\circ$

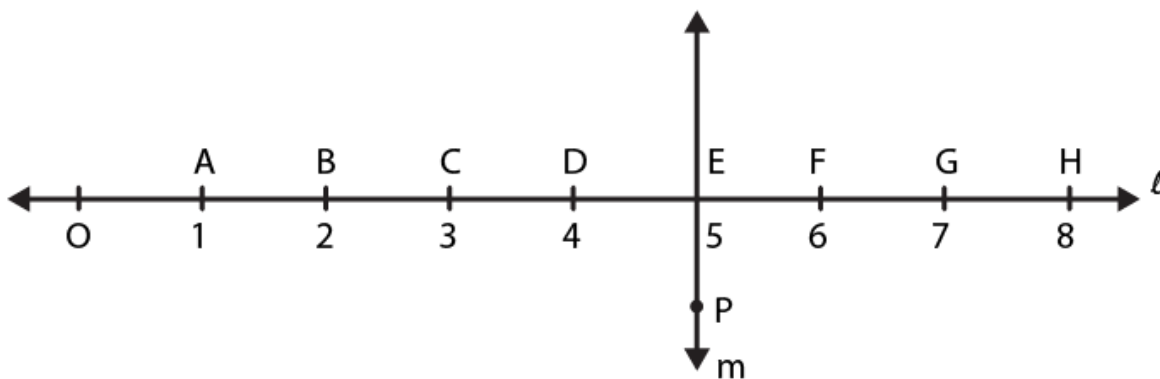
Q3 What part of a revolution will you turn through if you stand facing

(i) east and turn clockwise to face north?

(ii) west and turn clockwise to face east?

Q4 Study the diagram. The line l is perpendicular to line m

(a) Is $CE = EG$?



(b) Does PE bisect CG?

(c) Identify any two line segments for which PE is the perpendicular bisector.

(d) Are these true?

(i) $AC > FG$

(ii) $CD = GH$

(iii) $BC < EH$.

Q5 How many right angles will you make if you start facing

(a) South(S) and turn clockwise to the West(W)?

(b) North(N) and turn anti-clockwise to the East(E)?

Q 6. Give reasons for the following:

(i) A square can be thought of as a special rectangle.

(ii) A rectangle can be thought of as a special parallelogram.

(iii) A square can be thought of as a special rhombus.

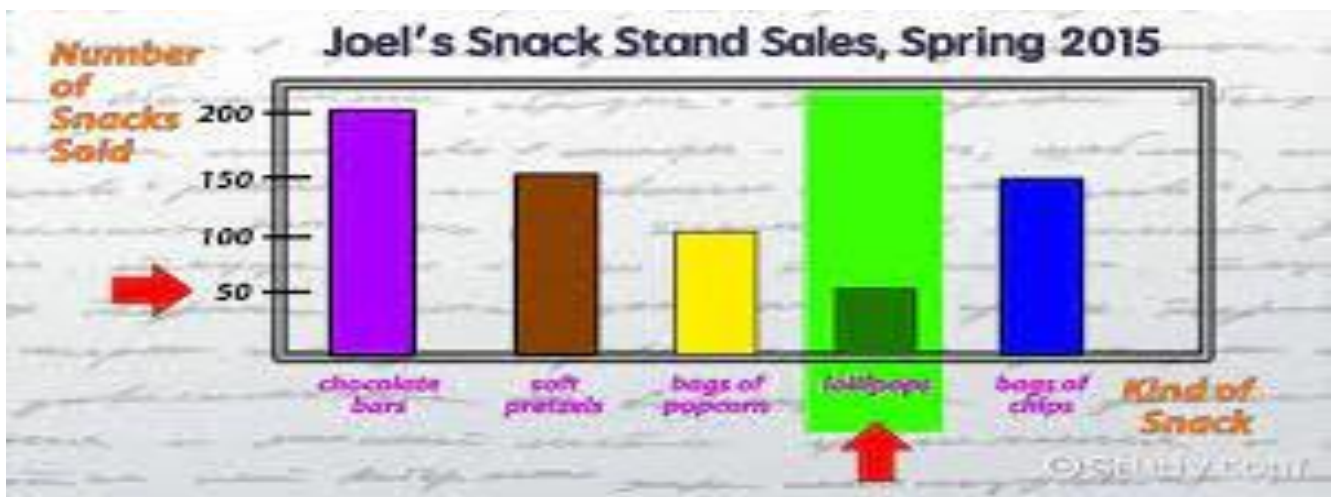
DATA HANDLING

Q1. Given below is the data showing the number of absentees in a class for 20 days:

2, 1, 3, 1, 2, 1, 1, 3, 2, 3, 2, 3, 2, 2, 4, 3, 1, 4, 3, 2

Represent the above data in the form of frequency distribution table using tally marks.

Q2. The following bar graph represents the sale of Joel's stands. Read the bar graph and answer the following questions:



a) Which is the most popular snack of the stand?

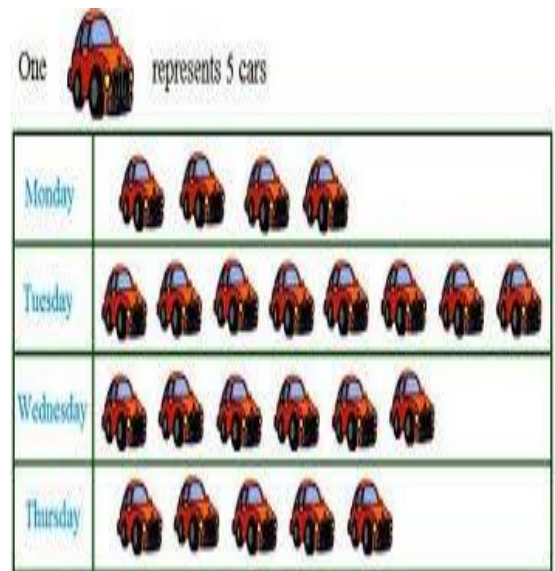
b) Which two snacks are equally liked by people?

c) How many more people like bags of popcorn than golgappe?

Q3. The given pictograph represents the manufacturing of cars during sales period.

Read the pictograph and answer the following questions:

- On which day the maximum number of cars were manufactured?
- How many cars were manufactured in these four days?
- How many more cars were manufactured on Wednesday than on Thursday?



Q4. Total number of students of a school in different years is shown in the following table:

Year	Number of students
1996	400
1998	550
2000	450
2002	600
2004	650

Represent the above data by a pictograph and answer the following questions:

- Find the increase in the number of students of year from 1996 to 2004.
- How many students were there in total from year 1998 to 2002?

MENSURATION

Q1. Find the perimeter of a regular pentagon with each side measuring 6cm.

Q2. Find the distance travelled by Nazia, if she takes three rounds of a square park of side 70m.

Q3. Find the cost of fencing a rectangular field 260 m long and 175 m wide at the rate of

₹ 40 per metre.

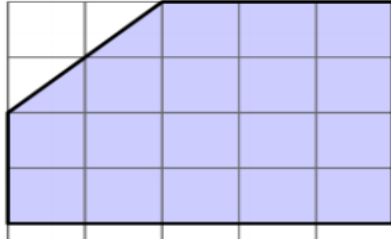
Q4. The area of a rectangle is 630 cm^2 and its length is 35 cm. Find the perimeter of the rectangle.

Q5. How many square tiles of side 0.5 m will be required to pave the floor of a room

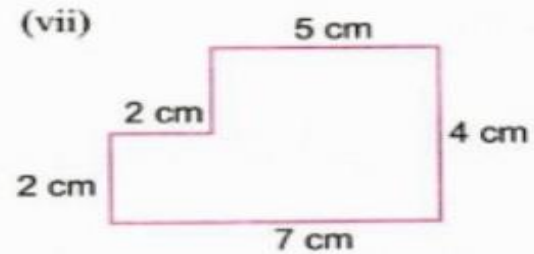
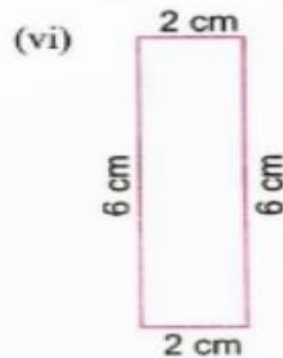
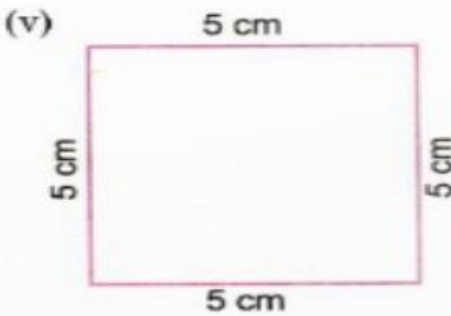
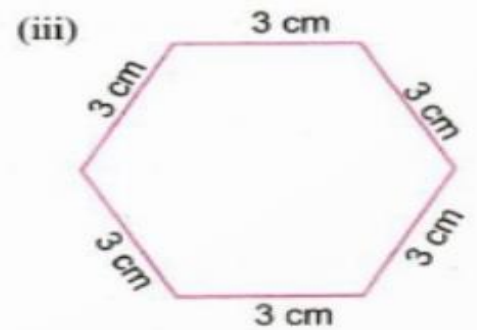
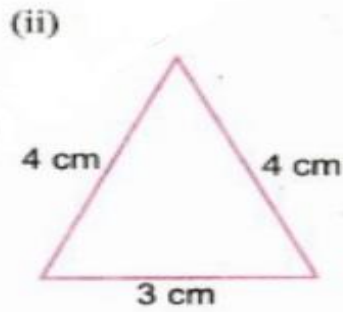
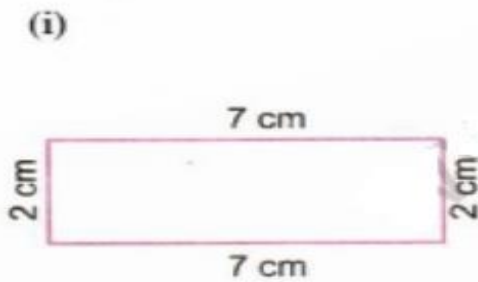
which is 4 m long and 3 m broad ?

Q6. The length and breadth of a rectangular park are in the ratio of 5 : 3 and its perimeter is 128 m. Find area of the park.

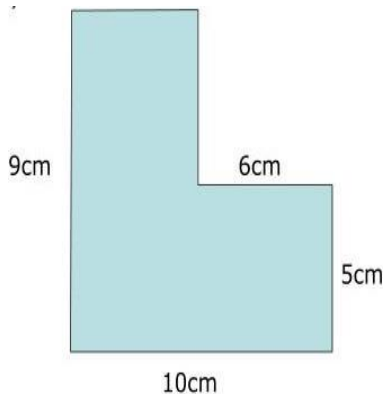
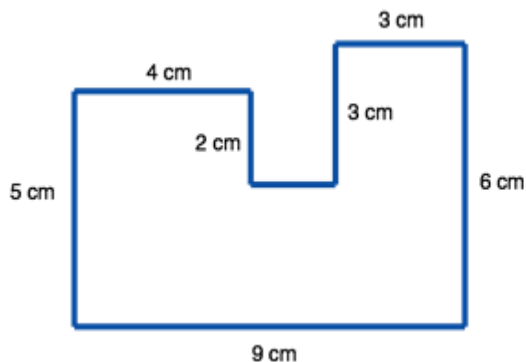
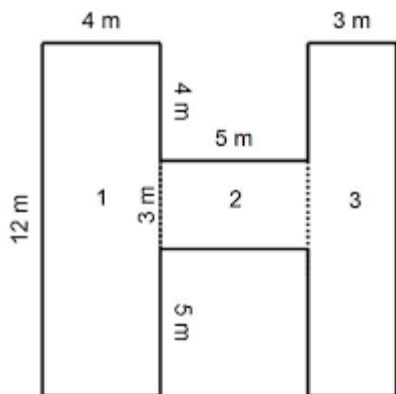
Q7. Find the area of the given figure:



Q8. Find the perimeter of given figures:



Q9. By splitting the following figures into rectangles, find their areas.



ASSERTION AND REASONING BASED QUESTIONS

DIRECTION: In the question a statement of Assertion(A) is followed by a statement of Reason(R). Choose the correct option.

- (a) Both Assertion and Reason are true and Reason is a correct explanation of Assertion.
- (b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.
- (c) Assertion is true and Reason is false.
- (d) Assertion is false and Reason is true.

Q 1 **Assertion (A):** Predecessor of 0 is 1

Reason (R): Preceding number is the number which comes before a number.

Q2 **Assertion (A):** Sum of two negative integers is always negative.

Reason (R): Sum of a positive integer and a negative integer is always a positive integer.

Q3 **Assertion (A):** We may use any letter n, l, p, m, x, y, z etc. to show any variable.

Reason(R): A variable takes on different values, its value is not fixed.

Q4 **Assertion (A):** A ratio is a way to compare two or more quantities of the same type.

Reason(R): A proportion is an equation that states that two ratios are equal to each other.