



REVISION SHEET

SUBJECT: MATHEMATICS

CLASS-VII

TERM 1

CH-2 ARITHMETIC EXPRESSIONS

Q1 -MULTIPLE CHOICE QUESTIONS

i) _____ is the expression for '6 more than twice of 4'.

a) $6 + 4 \times 2$

b) $2 \times 3 + 6$

c) $4 + 6 \times 2$

d) $2 + 6 \times 4$

ii) In the expression $10 + (4 + 9)$, _____ property is applied when we regroup as $(10 + 4) + 9$.

a) Commutative property

b) Associative property

c) Distributive property

d) Closure property

iii) Correct way to evaluate $35 + 4 \times 3$ is _____.

a) Add first and then multiply

b) Multiply first then add

c) Do both together

d) Subtract first

Q2) Write an expression for the total cost of 3 books, each costing ₹ 50 and evaluate it.

Q3) A teacher asked students to arrange themselves in groups of 6. There were 37 students in total and one student, Alex, decided not to participate. Write the expression for the total number of groups formed and identify the terms.

Q4) Write two expressions that have the same value as $60 \div 3$.

Q5) Solve the expression $(12 + 5) \times 3 - 4$.

Q6) Use the distributive property, simplify the expression:

$$5 \times (3 + 8) - 4 \times (6 - 2)$$

Q7) A farmer planted 15 rows of tomato plants, with 10 plants in each row. He already had 5 rows of plants from the previous year. Write an expression for the total number of plants and identify its terms.

Q8) In a school play, there are two groups of students-actors and dancers. The actors are arranged in 5 rows with 4 actors in each row, while the dancers are arranged in 3 rows with 4 dancers in each row. How many actors and dancers are there in total?

CH-3 A PEEK BEYOND THE POINT

Q1 -MULTIPLE CHOICE QUESTIONS

i) 6.5 cm in metres is equal to _____.

a) 0.65 m

b) 0.65mm

c) 6.5 mm

d) 0.065 m

ii) $\frac{7}{10}$ is equivalent to _____.

a) 0.007

b) 0.7

c) 0.07

d) 7.0

Q2) Add 3.251 and 1.75.

Q3) Subtract 3.45801 from 7.2632.

Q4) Convert 125 paise into rupees.

Q5) Arrange the following in ascending order.

2.03, 2.3, 2.303, 2.003

Q6) Write any two pairs of decimal numbers whose sum is 1.5.

Q7) Write the two whole numbers between which the sum of 48.76 and 35.19 lies. Show your working.

Q8) Reena is measuring the height of two stacked books. The thickness of the first book is $4\frac{4}{10}$ units and the second book is $2\frac{9}{10}$ units. What is the total height of the stacked books?

Q9) Aisha measured the length of her foot as $10\frac{6}{10}$ units and the heel as $4\frac{2}{10}$ units. What is the length of the rest of her foot?

Q10) Ravi ran 3.45 km on Monday, 5.75 km on Wednesday and 7.1 km on Friday. How many kilometres did he run in total?

CH-4 EXPRESSIONS USING LETTERS-NUMBERS

Q 1) In the following questions, letters are replaced by numbers and a value is given for each expression. However, some of these calculations might be incorrect. Carefully check each one. If you find a mistake, explain what went wrong and then correct it to find the right answer.

- (i) If $x = 4$, then $3(x + 2) = 18$
- (ii) If $q = -3$, then $5(q - 1) = 10$
- (iii) If $r = 6$, then $2(-r - 4) + 3 = 7$
- (iv) If $m = -4$ and $n = 3$, then $m + 2n = 2$
- (v) If $x = 4$ and $y = -5$, then $2y - (7 - 3x) = -15$

Q2) A printing shop charges ₹ c per page and ₹25 setup fee. Write an expression for 50 pages.

Q3) Are the expressions $7(x + 2y)$ and $7x + 9y$ equal? Justify with an example.

Q4) Derive an expression for the n th term of the pattern 4, 7, 10, 13,...

Q5) A square tile costs ₹ x and a border tile costs ₹ y . Write expression for total cost of m square tiles and n border tiles. Find the cost, if $m = 4$, $n = 3$, $x = 15$, $y = 10$.

Q6) Evaluate :

$$3(a + b) - (2a - b) \text{ when } a = 2, b = 5$$

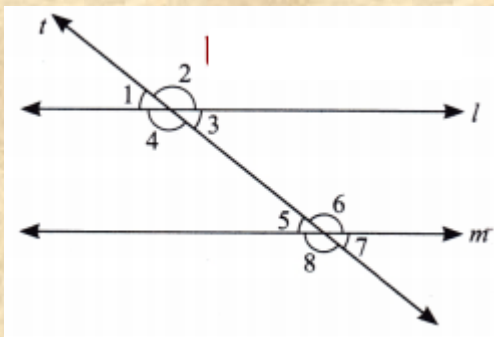
Q7) Rohan earned $(8m + 5n)$ points in Game 1 but lost $(3m - 2n)$ points due to a penalty and he earned $(4m + n)$ points in Game 2. Write and simplify an expression for his total points after both games and the penalties.

CH-5 PARALLEL AND INTERSECTING LINES

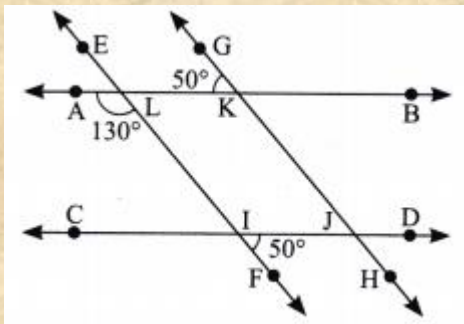
Q1) Multiple choice Questions:

- i) If $\angle x$ and $\angle y$ form a linear pair and $\angle x = 65^\circ$, $\angle y = ?$
- (a) 115° (b) 125° (c) 105° (d) 95°
- ii) If $\angle m$ and $\angle n$ are vertically opposite and $\angle m = 140^\circ$ then $\angle n$ is equal to
- (a) 40° (b) 140° (c) 180° (d) 90°
- iii) If $\angle A = (5x - 20)^\circ$ and its vertically opposite angle is 130° then the value of x is
- (a) 20° (b) 25° (c) 30° (d) 35°

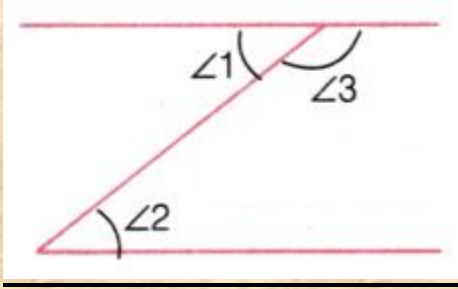
Q 2) In the given figure, $l \parallel m$ and t is a transversal. If $\angle 1 = 55^\circ$, find $\angle 2$, $\angle 3$, $\angle 4$, $\angle 5$, $\angle 6$, $\angle 7$ and $\angle 8$.



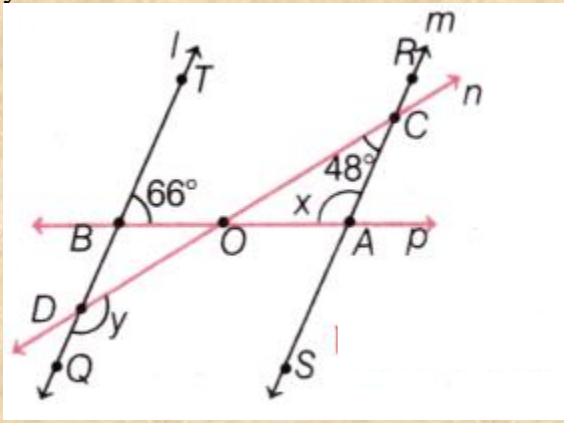
Q3) Find whether the lines AB and CD are parallel or not.



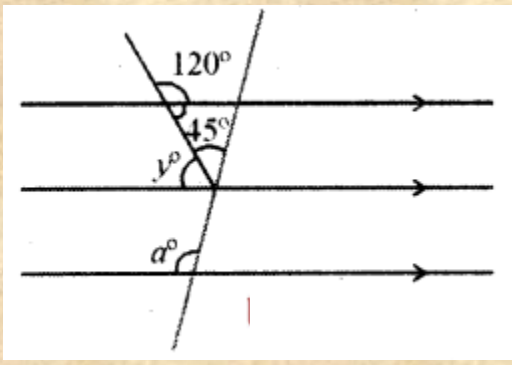
Q4) In the following figure, $\angle 2 = 58^\circ$. Find $\angle 1$ and $\angle 3$.



Q5) In the given figure, two parallel lines l and m are cut by two transversals n and p . Find the values of x and y .



Q6) Find $\angle y$ and $\angle a$.



CH-7 A TALE OF THREE INTERSECTING LINES

Q1) Multiple choice Questions:

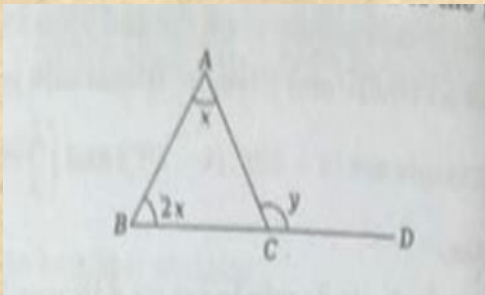
i) If two angles of a triangle are 45° and 55° , then what is the measure of the third angle?

- (a) 70° (b) 80° (c) 90° (d) 100°

(ii) If the interior angles of a triangle are in the ratio 2:3:4, then what are the measures of the angles?

- (a) 20° , 30° and 40° (b) 40° , 60° and 80° (c) 45° , 60° and 75° (d) 60° , 80° and 100°

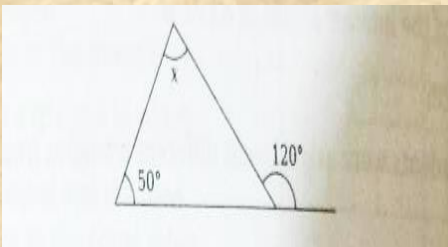
Q 2) In the given figure, $AB = AC$ and BC is extended to the point D . Then, calculate the value of $y - x$.



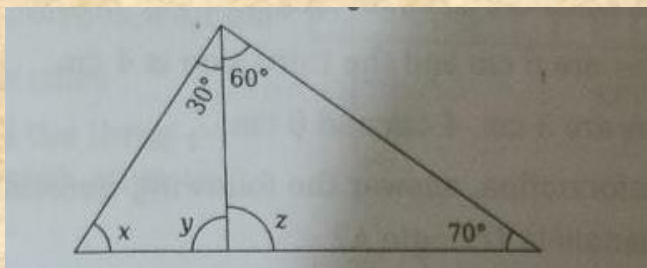
Q3) Construct an equilateral triangle whose side is 4 cm.

Q4) Find the number of altitudes in a triangle and draw a rough diagram.

Q5) Find the value of x in given figure:



Q6) In the given figure, find the values of x , y and z .



Q7) Construct a triangle whose sides are 3 cm, 4 cm and 5 cm.

Q8) If the two sides of an Isosceles triangle are 3 cm and 8 cm, then what is the length of the third side?

CH-8 WORKING WITH FRACTIONS

Q1) Multiple choice Questions:

i) The reciprocal of $3\frac{1}{2}$ is

- (a) $\frac{7}{2}$ (b) $\frac{2}{7}$ (c) $1\frac{2}{3}$ (d) None of these

(ii) $\frac{1}{3} \div \frac{5}{18}$ is equal to

- (a) $\frac{5}{54}$ (b) $\frac{6}{5}$ (c) $\frac{5}{6}$ (d) None of these

Q2) Find the difference between $\frac{2}{5}$ of 40 km and $\frac{2}{3}$ of 9 km.

Q3) The product of 2 numbers is $20\frac{3}{5}$. If one of them is $2\frac{2}{5}$, then find the other number.

Q4) Yamini bought $12\frac{3}{5}$ kg of mangoes and distributed the mangoes among children. The rate of mangoes is ₹ 75 per kg. Calculate the amount spent on mangoes.

Q5) Family photograph has length $14\frac{2}{5}$ cm and breadth $10\frac{2}{5}$ cm. It has border of uniform width $2\frac{3}{5}$ cm. Find the area of the framed photograph.

Q6) If a rectangular field is $16\frac{1}{3}$ m long and $10\frac{2}{5}$ m wide then find the area of the field.

ASSERTION-REASONING BASED QUESTION

DIRECTION: In the following questions, 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 and Reason is not a correct explanation of Assertion.
- c) Assertion is true but Reason is false.
- d) Assertion is false but Reason is true.

Q1) Assertion (A): $2 \times (5 + 3) = 2 \times 5 + 2 \times 3$.

Reason(R): The multiple of a sum is the same as the sum of the multiples.

Q2) Assertion (A) : The expression $60 + (30 - 10)$ becomes $60 - 30 + 10$.

Reason (R) : Brackets can be removed by changing signs when preceded by minus.

Q 3) Assertion (A) : 0.73 comes after 0.8 on the number line.

Reason (R) : 73 is greater than 8.

Q4) Assertion (A) : The decimal sequence 0.1, 0.2, 0.3, 0.4, 0.5 is in increasing order.

Reason (R) : In a decimal sequence, numbers with more digits are always larger.

Q5) Assertion (A) : The sum of the interior angles of any triangle is always 180° .

Reason (R) : This property holds true regardless of the type of triangle.

Q6) Assertion (A) : $\frac{5}{2} \div \frac{25}{4} = \frac{2}{5} \times \frac{4}{25}$

Reason (R) : While dividing a fraction by another fraction, we multiply the first fraction by the reciprocal of the other fraction.

Q7) Assertion (A) : Corresponding angles lie on the same side of transversal.

Reason (R) : They are formed in the same relative position on both lines.

Q8) Assertion (A) : In an equilateral triangle, the measures of each angle is 60° .

Reason (R) : The sum of the angles in a triangle is 180° and in an equilateral triangle, all angles are equal.

Q9) Assertion (A) : The total cost of 10 pens at ₹ p each and ₹ 5 delivery is ₹ (10p + 5).

Reason (R) : Delivery charge is deducted from the total cost.

Q 10) Assertion (A) : Intersecting lines can make angles of 90° each.

Reason (R) : All intersecting lines are perpendicular.

CASE-STUDY BASED QUESTIONS

Q 1) A school is planning a trip for its students. The school needs to arrange transport. Each bus can carry 40 students and 5 buses have been booked for the trip. Also, 10 students will travel in private cars.

On the basis of the above information, answer the following questions.

- (i) Write an expression to represent the total number of students going on the trip by bus.
- (ii) How many students are going on the trip by bus?
- (iii) If 2 more students decide to travel by private cars, how many students will now travel in total?
- (iv) If the school adds 2 more buses, how many total students can now travel by bus?

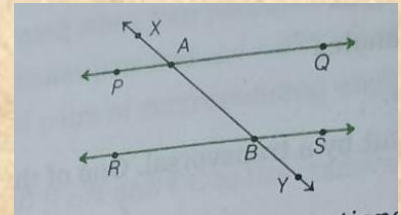
Q 2) Mira visits the market to buy vegetables for the week. She picks up four items weighing 0.75 kg, 1.35 kg, 2.05 kg and 0.65 kg. She is carrying a reusable shopping bag that has a weight limit of 5 kilograms. Mira

wants to ensure that the bag does not tear while carrying the vegetables back home.

On the basis of the above information, answer the following questions.

- (i) What is the total weight of the vegetables she bought?
- (ii) Can she buy another item weighing 0.45 kg? Why or why not?
- (iii) Convert the total weight to grams.
- (iv) How much more weight can she carry?

Q3) In a city plan, two streets PQ and RS are parallel. A diagonal road XY cuts across both forming angles.



Now, based on this, answer the following questions.

- (i) If $\angle PAY = 68^\circ$, find $\angle XBR$.
- (ii) If a street CD intersects PQ at 90° , what type of line is CD to PQ?
- (iii) Find the measure of alternate interior angle to $\angle PAY$.
- (iv) Name one pair of corresponding angles.

Q4) Ruhi made a cake using the ingredients given below. After making the cake, she distributes it to poor children.

Sugar = 2 cups

Coconut = 1 cup

Coco powder = 1 tablespoon

Eggs = 2

Milk = $\frac{3}{4}$ cup

Salt = $\frac{1}{8}$ teaspoon

Butter = $1\frac{1}{2}$ tablespoon

On the basis of above information, answer the following questions.

- (a) How much amount of each ingredient will be needed, if triple amount of cake is to be made?
- (b) How much amount of each ingredient will be needed, if half amount of cake is to be made?
- (c) What value is being promoted?

Q5) In a craft class, students were asked to cut different triangles from coloured paper to make a picture.

Adil made three triangles

Triangle A : All three sides are of equal length, 5 cm each.

Triangle B : Two sides are 6 cm and the third side is 4 cm.

Triangle C: The sides are 3 cm, 4 cm and 8 cm.

Based on the above information, answer the following questions.

- (i) Which type of triangle is Triangle A?
- (ii) Which type of triangle is Triangle B?
- (iii) Is Triangle C a valid triangle?
- (iv) Find the perimeters of Triangle A and Triangle B.