

CBSE Sample Paper

Maths Set – B

Class 7

Total marks: 90

1. All questions are compulsory.
2. The question paper consists of 34 questions divided into four sections A,B,C and D.
3. Section A contains 10 questions of 1 mark each, which are multiple choice type questions, Section B contains 8 questions of 2 marks each, Section C contains 10 questions of 3 marks each, Section D contains 6 questions of 4 marks each.
4. There is no overall choice in the paper. However, internal choice is provided in one question of 2 marks,3 questions of 3 marks and two questions of 4 marks.
5. Use of calculators is not permitted.

Time Allotted: 3 hours

Maximum Marks: 90

Section - A

1) Simplification of $\frac{3 \times 7^2 \times 11^8}{11^3 \times 21}$ is

- (A) 7 115.
- (B) 73 11.
- (C) 7 118.
- (D) 73 118.

2) A square has a rotational symmetry of order

(A) 4.

(B) 3.

(C) 2.

(D) 1.

3) How many medians can a triangle have?

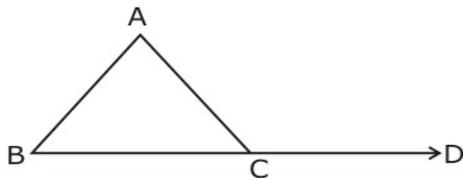
(A) 4

(B) 3

(C) 2

(D) 1

4) In the given figure, $\angle A = 60^\circ$, $\angle ACD = 120^\circ$. Then $\angle B$ is



(A) 80° .

(B) 70° .

(C) 60° .

(D) 50° .

5) Two angles are congruent. If one of them is 70° , the other one is

(A) 20° .

(B) 60° .

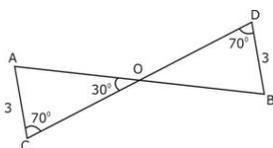
(C) 70° .

(D) 110° .

6) A cuboid has

- (A) 6 vertices.
- (B) 8 vertices.
- (C) 10 vertices.
- (D) 12 vertices.

7) In the given figure, the angle DBO is



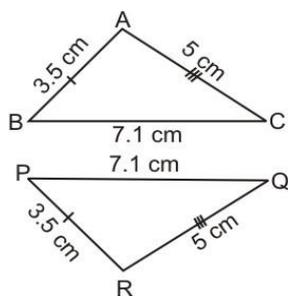
- (A) 90°.
- (B) 80°.
- (C) 70°.
- (D) 60°.

8) $\left| \frac{9}{10} \right| - \left| \frac{-9}{5} \right|$ is equal to

- (A) -10/9.
- (B) 10/9.
- (C) 9/10.
- (D) -9/10.

Section - B

9) In ABC and PQR, AB = 3.5 cm, BC = 7.1 cm, AC = 5 cm, PQ = 7.1 cm, QR = 5 cm and PR = 3.5 cm. Examine whether the two triangles are congruent or not. If yes, write the congruence relation in symbolic form.



10) Find angles x and y in the following figure:

11) Write 104278 in expanded form.

Or,

Simplify $\frac{2 \times 3^4 \times 2^5}{9 \times 4^2}$.

12) Construct a $\triangle ABC$, in which $B = 70^\circ$, $AB = 4.8$ cm and $BC = 5.2$ cm.

13) Find the total area of the four walls of a room whose dimensions are 6 m by 4.5 m by 3 m.

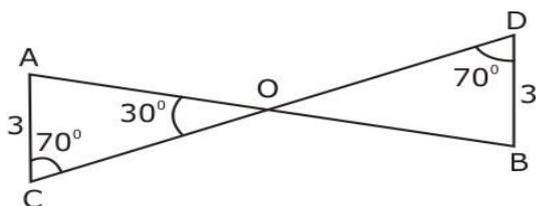
14) Write down the additive inverse of following rational numbers:

$\frac{3}{7}$ and $-\frac{4}{9}$

Section - C

15) In the given fig., can you use ASA congruence rule and conclude that

$\triangle AOC \cong \triangle BOD$?

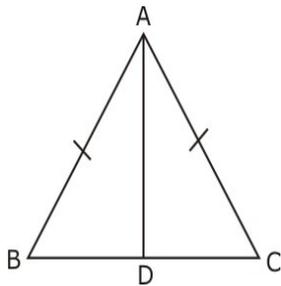


16) In $\triangle ABC$, $AB = AC$ and AD is the bisector of $\angle BAC$.

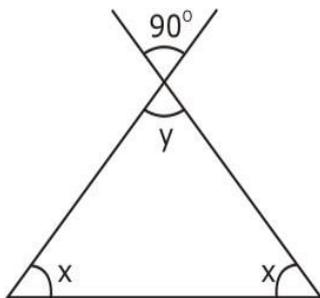
(i) State three pairs of equal parts in triangles $\triangle ADB$ and $\triangle ADC$.

(ii) Is $\triangle ADB \cong \triangle ADC$? Give reasons.

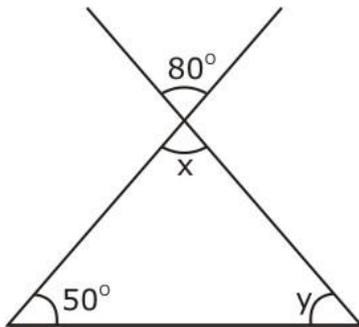
(iii) Is $\angle B = \angle C$? Give reasons.



17) Find angles x and y in the following figure:



18) Find angles x and y in the following figure:



19) Express the 16000 as a product of power of prime factors.

Or,

Simplify

$$(i) \frac{3^2 \times 4^5 \times x^4}{3^4 \times 4^3 \times x^9}$$

$$(ii) \frac{4^5 \times 9^5 \times x^7}{2^3 \times 3^6 \times x^5}$$

20) If $25\frac{1}{2}$ m rope is cut into 12 equal pieces what will be the length of each piece?

Or,

Express the following numbers in standard form.

(i) 296,851,358,200

(ii) 25,615,646,430

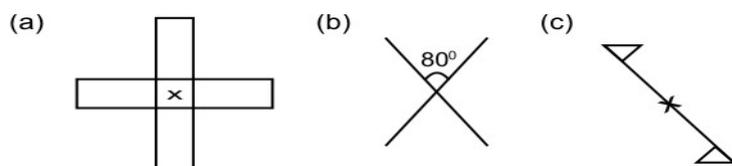
21) How many wooden cubical blocks of edge 12 cm can be cut from another cubical block of wood of edge 3 m and 60 cm?

Or,

A box is in the shape of a cuboid. If its length, breadth and height are 50cm, 20 cm and 15 cm respectively, find its surface area.

22) Construct triangle LMN, right-angled at M, given that LN = 5 cm and MN = 3 cm.

23) Give the order of rotational symmetry for each figure:



24) Given $a = \frac{3}{5}$ and $b = \frac{-2}{5}$ and prove that $a + b = b + a$.

Section - D

25) Draw a line, say AB, take a point C outside it. Through C, draw a line parallel to AB using a ruler and compass only.

26) Find the centre of rotation, order of rotation and angle of rotation of the following shapes.

(i) Square (ii) Rectangle

(iii) Rhombus (iv) Circle

27) Simplify and write the answer in exponential form.

(i) $(65)^3 \div 63$ (ii) $(950)^3$ (iii) $(532)^5$ (iv) $(264)^5$

28) Mayank reads $\frac{1}{3}$ of a storybook on the first day and $\frac{1}{4}$ of the book on the second day. What part of the story book is yet to be read by Mayank?

29) In Quadrilateral ABCD, triangle AD = BC, triangle AB = CD and BD is a diagonal, prove that triangle

\cong ABD triangle CDB. State the congruent parts too.

Or,

In the given figure, $\angle SPR = \angle QRP$ and $\angle RSP = \angle PQR$. Show that $PQ = SR$.

30) ABCD is a quadrilateral, diagonal AC bisects A and

$AB = AD$, prove that $DC = BC$.

31) A tree is broken at a height of 12 m from the ground and its top touches the ground at a distance of 5 m from the base of the tree. Find the original height of the tree.

Or,

A 13 m long ladder reached a ventilator 12m high from the ground on placing it against a wall at a distance. Find the distance of the foot of the ladder from the wall.

32) Write the number of faces, edges and vertices in the solids given below.

(i) Cube (ii) Pyramid

(iii) Prism (iv) Brick

33) Draw the figure of cross sections obtained by cutting vertically the following shapes.

(i) Cylinder (ii) Sphere

(iii) Prism (iv) Cone

34) In triangle PQR, PS is median. Show that $PQ + QR + RP > 2PS$.