



In The Service of Student Community

The No. 1 CBSE Mathematics website in the world

1 Mark Each

1. On rationalizing the denominator $\frac{1}{n + \sqrt{n+1}}$ where $n = 5$ becomes
 (a) $\frac{5 - \sqrt{6}}{19}$ (b) $5 + \sqrt{6}$ (c) $\frac{1}{5 + \sqrt{6}}$ (d) $\frac{1}{5 - \sqrt{6}}$
2. If $\frac{x}{y} + \frac{y}{x} = -1$ ($x, y \neq 0$), then value of $x^3 - y^3$ is
 (a) 1 (b) - 1 (c) 0 (d) $\frac{1}{2}$
3. Line $y = 7$ is parallel to _____ axis
 (a) x axis (b) y axis (c) both (d) None of these
4. The number of dimensions, a solid has
 (a) 1 (b) 2 (c) 3 (d) 0
5. If one of the angles of a triangle is 130° , then the angle between the bisectors of the other two angles can be
 (a) 50° (b) 65° (c) 145° (d) 155°
6. D is a point on the side BC of a ΔABC such that AD bisects $\angle BAC$. Then
 (a) $BD = CD$ (b) $BA > BD$ (c) $BD > BA$ (d) $CD > CA$
7. Which of the following needs a proof
 (a) Theorem (b) Axiom (c) Definition (d) Postulate
8. Two sides of a triangle have lengths 8 cm and 3 cm. The third side lies between
 (a) 5 and 11 (b) 4 and 11 (c) 3 and 11 (d) None of these
9. An irrational number between 2 and 2.1 is
 (a) 2.011... (b) 2.010110111111 (c) 2.001... (d) 2.010110111111...
10. The coefficient of x in $(3x + 5)(3x + 11)$ is
 (a) 9 (b) 48 (c) 15 (d) None of these

2 Marks Each

11. x is an irrational number. What can you say about the number x^2 . Justify.
12. Ray OC stands on line AB. OP and OQ are bisectors of angles AOC and BOC respectively. $\angle POQ = 90^\circ$. Justify.

Also Visit cbsemathspapers.com



In The Service of Student Community

The No. 1 CBSE Mathematics website in the world

13. $AB = AC, AC = BC$. Then ΔABC is of the type _____. Justify using Euclid's Postulate.
14. Without finding the cubes, factorise $(x - y)^3 + (y - z)^3 + (z - x)^3$.
15. Write general form of polynomial of degree 3.
16. $DE \parallel QR$ are cut by transversal n at A and B respectively. AP and BP are bisectors of $\angle EAB$ and $\angle RBA$, respectively. Find $\angle APB$.
17. How many triangles can be drawn having its angles as $54^\circ, 64^\circ$ and 62° ? Give reason for your answer.
18. Mark points $(2, 2), (-2, 2), (-2, -2), (2, -2)$ in order. What polygon do you get?

3 Marks Each

19. Represent $\sqrt{29}$ on number line. Prove your construction.

20. If $x = \sqrt{3} - 2$, find the value of $\sqrt{x} - \frac{1}{\sqrt{x}}$

21.
$$\frac{7 + \sqrt{5}}{7 - \sqrt{5}} - \frac{7 - \sqrt{5}}{7 + \sqrt{5}} = a - \frac{7}{11}\sqrt{5}b$$

22. Factorise : $16x^2 + 24xy + 9y^2 - 25x^2$

23. Factorise $a^6 - b^6$ completely.

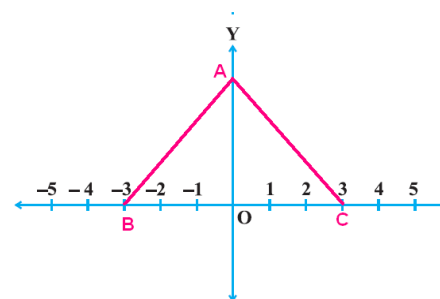
24. In fig1. ΔABC is equilateral as shown. Find coordinates of C

25. Two lines are respectively perpendicular to two parallel lines. Show that they are parallel to each other.

26. Prove that the sum of the three angles of a triangle is 180° .

27. ABC is a right triangle and right angled at B such that $\angle BCA = 2\angle BAC$. Show that hypotenuse $AC = 2 BC$.

28. If the bisector of an angle of a triangle also bisects the opposite side, prove that the triangle is isosceles.





In The Service of Student Community

The No. 1 CBSE Mathematics website in the world

4 Marks Each

29. Prove that $(a + b + c)^3 - a^3 - b^3 - c^3 = 3(a + b)(b + c)(c + a)$.

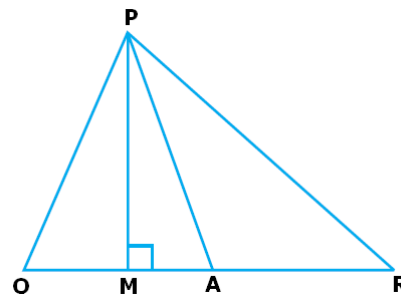
30. Factorise: $x^3 + 13x^2 + 32x + 20$

31. Factorise: $\frac{l^3}{m^3} + \frac{m^3}{n^3} + \frac{n^3}{l^3} - 3$

32. S is any point in the interior of ΔPQR .
Show that $SQ + SR < PQ + PR$.

33. ABC is a right triangle such that $AB = AC$ and bisector of angle C intersects the side AB at D. Prove that $AC + AD = BC$.

34. In Fig 2, $\angle Q > \angle R$, PA is the bisector of $\angle QPR$ and $PM \perp QR$.
Prove that $\angle APM = \frac{1}{2}(\angle Q - \angle R)$



Also Visit
cbse.biz

History Civics Economics and Geography sample papers and S.S. Mock Tests

And

cbseresults2009.com

Latest on CBSE Results 2011 – X, XII & AIEEE

And

cbseresults2010.com

See Previous years CBSE Results X and XII. Also AIEEE & AIPMT