

Class: VI
Subject: Mathematics
Topic: ASK1506UT02
No. of Questions: 30

1) An angle of measure 90° is called?

- (A) A complete angle
- (B) A right angle
- (C) A straight angle
- (D) A reflex angle

SOL. (B)

An angle of measure 90° is called a right angle

2) What should be subtracted from (-1963) to obtain (-9512) ?

- (A) -11475
- (B) -7549
- (C) 7549
- (D) 11475

SOL. (C)

The required integer can be obtained by subtracting -9512 from -1963 .

$$\therefore (-1963) - (-9512) = (-1963) + (9512) = 7549$$

Thus, the required integer is 7549

3) How many end points a line segment has?

- (A) 2
- (B) 4
- (C) 3
- (D) 5

SOL. (A)

A line segment has exactly two endpoints. If it had less, then it would just be a point. If it was more, then it wouldn't be a segment anymore

4) What is the additive inverse of 6?

- (A) 6
- (B) 1
- (C) 0
- (D) -6

SOL. (D)

Additive inverse is a number when added to any number, results in zero.

Every number has a number with same value but opposite sign. This number is additive inverse.

So, additive inverse of 6 is -6

because: $6 + (-6) = 6 - 6 = 0$

5) The number of diagonals in a triangle is?

- (A) 3
- (B) 2
- (C) 0
- (D) 1

SOL. (C)

Diagonals are the line segments obtained by joining any two non-consecutive vertices of a polygon. So, in a triangle, there are no diagonals as the line segments so obtained are the sides of the triangle.

6) The supplementary angle of $\frac{1}{2} \times 120^\circ$?

- (A) 130°
- (B) 120°
- (C) 60°
- (D) 100°

SOL. (B)

We know that, the sum of supplementary angles is 180° .

Thus, the supplementary angle of $\frac{1}{2} \times 120^\circ = 180^\circ - (\frac{1}{2} \times 120^\circ)$

$$= 180^\circ - 60^\circ$$

$$= 120^\circ$$

Hence, the measure of required angle is 120°

7) How many circles can be drawn to pass through three non – collinear points?

- (A) 1
- (B) 2
- (C) 0
- (D) As many as possible

SOL. (A)

One circle can be drawn. Join the points draw perpendiculars of those two lines. Where these lines intersect it is center of circle. Then with the distance between the center and one point as radius draw the circle.

8) If a bicycle wheel has 36 spokes, then the angle between a pair of adjacent spokes is?

- (A) 20°
- (B) 10°
- (C) 15°
- (D) 12°

SOL. (B)

The complete central angle of a bicycle wheel measures 360°

Therefore, the angle between two adjacent spokes of the wheel containing 36 spokes

$$= \frac{360}{36} = 10^\circ$$

9) What is the value of $(39) + (-46) + (-10) + (79)$?

- (A) 62
- (B) -62
- (C) +76
- (D) -76

SOL.(A)

Value of $(39) + (-46) + (-10) + (79)$

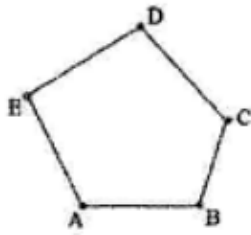
$$= 39 - 46 - 10 + 79$$

$$= (79 + 39) + (-46 - 10)$$

$$= 118 - 56$$

$$= 62$$

10) How many match stick to use this polygon (look in figure)



- (A) 5
- (B) 8
- (C) 14
- (D) 20

Sol. (A)

As shown in the figure 5 match sticks have been used to make this polygon.

11) A tetrahedron is a pyramid whose base is a?

- (A) triangle
- (B) square
- (C) rectangle
- (D) quadrilateral

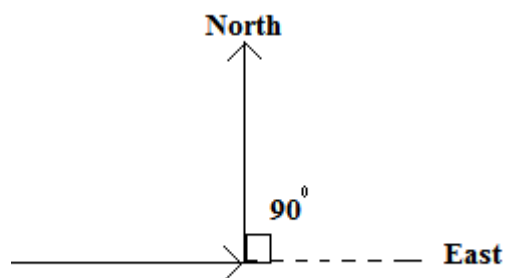
SOL. (A)

A tetrahedron is a pyramid whose base is a triangle. It has six edges and four face, all triangular

12) A ship sailing in river Jhelum moves towards east. If it changes to north, through what angle does it turn?

- (A) 90°
- (B) 180°
- (C) 270°
- (D) None of these

SOL. (A)



If a ship is sailing in east direction and turns to north direction, it turns through an angle of 90° degrees

13) If a and b are two integers such that a is the predecessor of b. Find the value of $a - b$?

- (A) 1
- (B) -2
- (C) -1
- (D) 0

SOL. If a and b are integers such that a is the predecessor of b, that is $a = b - 1$

$$\therefore (a - b)$$

$$= (b - 1) - b$$

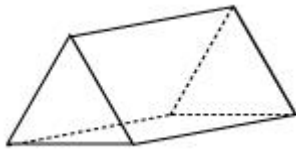
$$= b - 1 - b$$

$$= -1$$

14) Which of the following statements is incorrect?

- (A) A hexagon has 9 diagonals
- (B) A triangular prism has 5 faces, 9 edges and 7 vertices
- (C) The diagonals of a square are equal and perpendicular to each other
- (D) If the length of the diameter of a circle is 12 cm, then its radius is 6 cm

SOL. (B)



It can be observed that a triangular prism has 6 vertices, 5 faces, and 9 edges.

Thus, the statement given in alternative B is incorrect

15) What is the missing value in the expression $\{(-267) - (-276) - 15 = \square + (-2) + (-1)\}$?

- (A) -18
- (B) -3
- (C) 3
- (D) 18

SOL. (B)

The given expression is $\{(-267) - (-276) - 15 = \square + (-2) + (-1)\}$

Consider L.H.S

$$\begin{aligned}(-267) - (-276) - 15 &= [(-267) - (-276)] - 15 \\ &= 9 - 15 \\ &= -6 \\ &= (-3) + (-2) + (-1)\end{aligned}$$

Thus, the missing number is -3

16) By joining any two points on a circle, we obtain its?

- (A) Radius
- (B) Diameter

- (C) Chord
- (D) Circumference

Sol.(C)

A chord refers to the segment joining any two points together

17) If the diagonals of quadrilateral bisect each other at right angle, then the quadrilateral is a?

- (A) Parallelogram
- (B) Rectangle
- (C) Rhombus
- (D) Kite

Sol. (C)

Rhombus all four sides are of equal length. An equivalent condition is that the diagonals perpendicularly bisect each other

18) Line segments joining the vertices to the mid- points of the opposite sides of a triangle are known as

- (A) medians
- (B) altitudes
- (C) heights
- (D) angle bisectors

Sol. (A)

A median is defined as the line segment joining the vertex to the mid-point of the opposite side of a triangle.

19) A triangle whose one angle is more than 90° is called?

- (A) A scalene triangle
- (B) A right triangle
- (C) An Acute triangle
- (D) An obtuse triangle

Sol.(D)

An obtuse triangle is a triangle whose one angle is more than 90° .

20) The length of the radius of a circle is 8 cm. If the radius is made three times, then what will be the diameter of the newly formed circle?

- (A) 12 cm
- (B) 24 cm
- (C) 48 cm
- (D) 96cm

SOL. (C)

Radius of the new circle = $3 \times$ Radius of original circle

Radius of the new circle = $3 \times 8 = 24$ cm

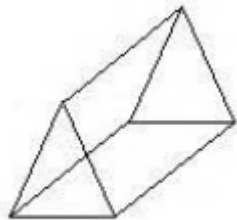
It is known that diameter of a circle is twice its radius.

Thus, diameter of the newly formed circle = $2 \times 24 = 48$ cm

21) Which of the following three dimensional figures has 6 vertices and 9 edges?

- (A) Rectangular prism
- (B) Triangular pyramid
- (C) Square pyramid
- (D) Triangular prism

SOL. (D)



A triangular prism is a three dimensional figure that has two identical triangular bases separated by equal distance. Its other faces are rectangles. It has 6 vertices and 9 edges.

22) A fighter plane, flying at a height of 3800 m above the sea level, drops a bomb on a submarine lying 400 m below the sea level. What is the distance between the fighter plane and the submarine when the bomb is dropped?

- (A) 3400 m
- (B) 3600 m

- (C) 4200 m
- (D) 4600 m

SOL. (C)

Taking the sea level as the reference point,

The height of the fighter plane = 3800 m

Depth of the submarine = - 400 m

Thus, when the bomb is dropped the distance between the fighter plane and the submarine is

$3800 \text{ m} - (-400 \text{ m})$

When we subtract an integer from another integer, the additive inverse of the integer that is

Being subtracted must be added to the other integer

Therefore, we can subtract -400 from 3800 as

$$3800 - (-400) = 4200 \text{ m}$$

Hence, the distance between the fighter plane and the submarine is 4200 m

23) A quadrilateral having one and only pair of parallel sides is called?

- (A) A parallelogram
- (B) A Kite
- (C) A rhombus
- (D) A trapezium

Sol.(D)

Only trapeziums since parallelograms, rhombus and other quadrilaterals have two pairs of sides parallel.

24) The vertex of an angle lies?

- (A) In its interior
- (B) In its exterior
- (C) On the angle
- (D) Inside the angle

Sol.(C)

The vertex of an angle lies on the angle

25) An angle of measure 0° is called?

- (A) A complete angle
- (B) A right angle
- (C) A straight angle
- (D) None of these

Sol.(D)

None of these because an angle measure 0° is called a zero angle.

26) The sum of the two integers is -396 . If one of them is 64 , determine the other.

- (A) -460
- (B) 332
- (C) 460
- (D) -332

Sol. (A)

We have,

$$\begin{aligned}\text{Required integer} &= -396 - 64 \\ &= -(396 + 64) = -460\end{aligned}$$

27) Write the integer which is 5 more than -5 ?

- (A) -1
- (B) 0
- (C) -10
- (D) 10

Sol. (B)

$$5 + (-5) = 5 - 5 = 0$$

Hence the integer is 0

28) Write with appropriate sign: 15°C below 0°C temperature?

- (A) -15
- (B) 15
- (C) 5
- (D) -5

Sol. (A)

Temperature below 0°C is denoted by '-' sign. Therefore, -15

29) Find the value $-21 + (-9) + 63 + (-22) + (-228) + 137$

- (A) 28
- (B) 80
- (C) -80
- (D) 58

Sol.(C)

We have,

$$\begin{aligned} & -21 + (-9) + 63 + (-22) + (-228) + 137 \\ & = (63 + 137) [(-21) + (-9) + (-22) + (-228)] \\ & = 200 + (-280) \\ & = -(280 - 200) = -80 \end{aligned}$$

30) The temperature of a city was found to be 3°C on a particular day. Next day, the temperature of the city was found to be -4°C . What is the change in the temperature of the city over the two days?

- (A) Decrease by 7°C
- (B) Decrease by 1°C
- (C) Increase by 1°C
- (D) Increase by 7°C

SOL. (A)

Temperature of the city on the first day = 3°C

Temperature of the city on the first day = -4°C

It can be observed that temperature of the city decreases over the two days.

∴ Decrease in temperature = $3^{\circ}\text{C} - (-4^{\circ}\text{C})$

$$= 3^{\circ}\text{C} + 4^{\circ}\text{C} = 7^{\circ}\text{C}$$

Thus, the temperature of the city decreases by 7°C over the two days

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