Understanding Elementary Shapes

Test

Time - 45 minutes **Maximum Marks - 20**

Important Instructions

- This test contains 20 questions.
- Each question has FOUR options (1), (2), (3) and (4). ONLY ONE of these four options is correct.
- For each question, marks will be awarded in one of the following categories.
  Full Marks : +1 : If only correct answer is given.
  Zero Marks : 0 : If no answer is given.
  Negative Marks : There is no negative marking.

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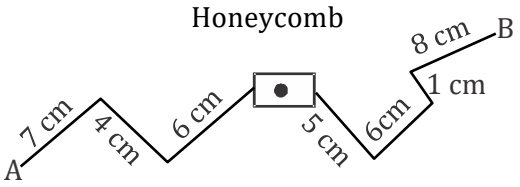
1. A monkey is at A and a honeybee is at B. How much more the honeybee has to travel than the monkey to reach the honeycomb?



(1) 3 cm (2) 4 cm (3) 2 cm (4) 1 cm

2. If you are facing east and turn clockwise through 270°, which direction would you face?

(1) North (2) South (3) East (4) West

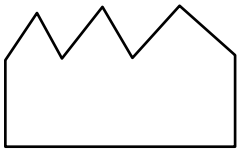
3. Find the angle when the hour hand goes from 2 to 5?

(1) 120° (2) 90° (3) 45° (4) 75°

4. Which of the following is an example of obtuse angle?

(1) 90° (2) 130° (3) 180° (4) 260°

5. Write the name of the polygon below.



(1) Heptagon (2) Decagon (3) Octagon (4) Nonagon

6. Find the reflex angle between the hands of a clock at 4 'O' clock.

(1) 120° (2) 240° (3) 260° (4) 280°

7. A triangle whose each angle is less than 90° is

(1) an obtuse angled triangle (2) an acute angled triangle
(3) an equilateral triangle (4) none of these

8. Every rhombus is a

(1) square (2) parallelogram (3) rectangle (4) none of these

9. A triangular prism has _____ faces.

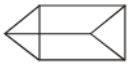
(1) 9 (2) 8 (3) 7 (4) 5

10. What part of a revolution have you turned through if you stand facing north and turn clockwise to face east?

(1) $\frac{1}{4}$ (2) $\frac{1}{2}$ (3) $\frac{1}{3}$ (4) None of these.

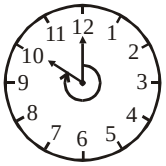
11. The shape  is of

(1) Cone (2) Cylinder (3) Sphere (4) Pyramid

12. The number of edges of the shape  is

(1) 6 (2) 8 (3) 9 (4) 4

13. Which angle is shown by the hands of the clock in the given figure ?

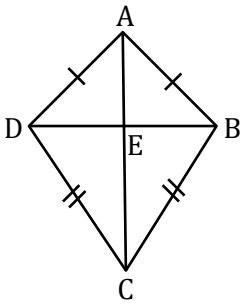


(1) Acute (2) Right (3) Obtuse (4) Reflex

14. Park Street and Bond Street are at 90° angle. Which term best describes the streets?

(1) Intersecting (2) Parallel (3) Perpendicular (4) None of these

15. In the given figure, if ∠BAC = 27°, Find the value of ∠ADB.



(1) 52° (2) 60° (3) 63° (4) 45°

16. Comparison of lengths is possible in case of:

(1) two lines (2) two rays

(3) two line segments (4) a ray and a line segment

(Q.17 to 20) Match the Column-I with Column-II and choose the correct option.

(A)	Straight angle	(p)	Between $\frac{1}{4}$ and $\frac{1}{2}$ of a revolution
(B)	Right angle	(q)	Less than one – fourth of a revolution
(C)	Acute angle	(r)	One – fourth of a revolution
(D)	Obtuse angle	(s)	Half of a revolution

17. Option A matches with

(1) p (2) q (3) r (4) s

18. Option B matches with

(1) p (2) q (3) r (4) s

19. Option C matches with

(1) p (2) q (3) r (4) s

20. Option D matches with

(1) p (2) q (3) r (4) s

Test Solutions

Answer Key

Question	1	2	3	4	5	6	7	8	9	10
Answer	1	1	2	2	4	2	2	2	4	1
Question	11	12	13	14	15	16	17	18	19	20
Answer	3	3	4	3	3	3	4	3	2	1

1. Option (1)

Distance Covered by monkey = 7 + 4 + 6 = 17cm

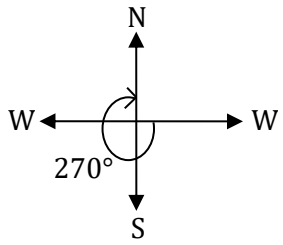
Distance Covered by honeybee = 8 + 1 + 6 + 5 = 20cm

Difference of their distance = 20 – 17 = 3cm

$\therefore$ Honeybee has to travel 3cm more than monkey.

2. Option (1)

North



3. Option (2)

In one hour we move $\frac{1}{12}$ of 360° = 30°

$\therefore$ In 3 hours (2 to 5), we will move = 30° × 3 = 90°

4. Option (2)

130° is obtuse angle.

Obtuse Angle is greater than 90° and less than 180°.

5. Option (4)

Polygon having 9 sides are called nonagon.

6. Option (2)

Reflex angle means we need to measure anticlockwise.

As one hour = 30°

$\therefore$ 12 to 6 (Anticlockwise) = 180°

And 6 to 4 = 60° $\Rightarrow$ 180° + 60° = 240°

7. Option (2)

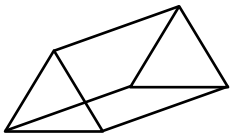
An acute angled triangle, each angle of acute angle is less than 90°.

8. **Option (2)**

Parallelogram, both having the parallel opposite sides and opposite angles are equal.

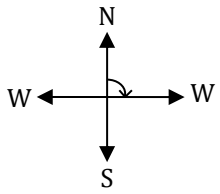
9. **Option (4)**

Triangular prism has 5 faces.



10. **Option (1)**

$\frac{90°}{360°} = \frac{1}{4}$,



11. **Option (3)**

Sphere having no edge and no vertices.

12. **Option (3)**

Triangular Prism has 9 edges.

13. **Option (4)**

Reflex angle is an angle more than 180° and less than 360°.

14. **Option (3)**

Perpendicular, at 90° lines are perpendicular to each other.

15. **Option (3)**

In ΔADB, $\overline{AD} = \overline{AB}$, $\therefore \angle ADB = \angle ABD$

ΔADB is isosceles tringle.

$\angle BAC = 27°$, $\angle AEB = 90°$ (Right Angled)

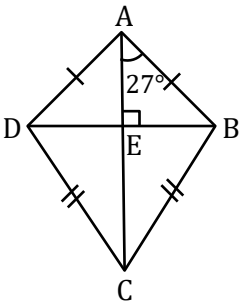
$\therefore$ Sum of Angles of $\Delta AEB = 180°$

$\Rightarrow \angle BAE + \angle AEB + \angle EBA = 180°$

$\Rightarrow 27° + 90° + \angle EBA = 180°$

$\therefore \angle EBA = 63°$ and $\angle EBA = \angle ADB = 63°$

(Angles opposite to the equal sides of an isosceles triangle are also equal.)

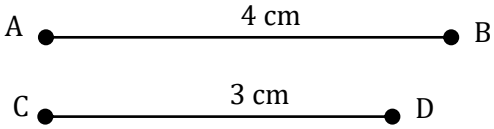


16. **Option (3)**

Two segments, line segments having finite length.

$\therefore$ E.g. Length of $\overline{AB}$ = 4 cm

Length of $\overline{CD}$ = 3 cm



As both line segments finite, it is possible to compare them.

17. Option (4)

Straight Angle → Half of a revolution. (Straight Angle is making 180°)

18. Option (3)

Right Angle → One-fourth of a revolution. (Right Angle is making 90°)

19. Option (2)

Acute Angle → Less than one-fourth of a revolution. (Acute Angle is less than 90° and more than 0°)

20. Option (1)

Obtuse Angle → Between $\frac{1}{4}$ and $\frac{1}{2}$ of a revolution. (Obtuse Angle is more than 90° and less than 180°)