

Advanced Foundations of Early Geometry

Basic Geometry · Answer Key · 20 Questions

1. How many vertices does a standard pyramid with a square base have?

- A) 4
- B) 5**
- C) 6
- D) 8

2. A shape with exactly six sides is known by what mathematical name?

- A) Pentagon
- B) Hexagon**
- C) Heptagon
- D) Octagon

3. What is the total number of flat faces on a standard cube?

- A) 4
- B) 6**
- C) 8
- D) 12

4. Which of these shapes has the greatest number of sides?

- A) Triangle
- B) Square
- C) Pentagon**
- D) Rectangle

5. A circle has how many corners or vertices?

- A) 0**
- B) 1
- C) 2
- D) Infinite

6. Which shape is created by connecting four points of equal distance in a square arrangement, but tilted 45 degrees?

- A) Circle
- B) Diamond**
- C) Triangle
- D) Pentagon

7. What do we call a shape that has no straight lines at all?

- A) Square
- B) Triangle
- C) Circle**
- D) Hexagon

8. If a triangle has three sides of different lengths, what is it specifically called?

- A) Equilateral
- B) Isosceles
- C) Scalene**
- D) Square

9. How many sides does an octagon have, similar to the legs of a sea creature?

- A) 6
- B) 7
- C) 8**
- D) 9

10. Which solid shape has two circular faces and one curved surface?

- A) Sphere
- B) Cylinder**
- C) Cone
- D) Cube

11. What is the term for a line segment that joins two opposite corners of a square?

- A) Side
- B) Radius
- C) Diagonal**
- D) Edge

12. How many edges does a rectangular prism have?

- A) 6
- B) 8
- C) 10
- D) 12**

13. What defines a polygon?

- A) It must have curved sides
- B) It must be a closed shape with straight sides**
- C) It must be a 3D object
- D) It must have at least 10 sides

14. A cone has how many flat faces?

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

15. Which shape is formed by the intersection of two straight lines?

- A) Angle**
- B) Vertex
- C) Circle
- D) Sphere

16. How many sides does a pentagon have?

- A) 4
- B) 5**
- C) 6
- D) 7

17. What is a three-dimensional shape where all points on the surface are an equal distance from the center?

- A) Cube
- B) Cylinder
- C) Sphere**
- D) Pyramid

18. When two lines meet to form a corner, what is that point called?

- A) Side
- B) Face
- C) Vertex**
- D) Edge

19. How many triangles are needed to form a square when joined at their hypotenuses?

- A) 1
- B) 2**
- C) 3
- D) 4

20. What shape remains the same even if you rotate it?

- A) Triangle
- B) Rectangle
- C) Circle**
- D) Pentagon