Chapter 8

1. In a right triangle, the ratio of the length of the perpendicular drawn from the right angle to the hypotenuse is called:

a) Sine

b) Cosine

c) Tangent

d) Secant

Answer: a) Sine

2. Which of the following ratios represents the cosine function in a right triangle?

a) Opposite/Hypotenuse

b) Adjacent/Hypotenuse

c) Hypotenuse/Opposite

d) Hypotenuse/Adjacent

Answer: b) Adjacent/Hypotenuse

3. The value of the tangent function is equal to:

a) $\sin \theta \times \cos \theta$

b) $\cos \theta \times \sin \theta$

c) $\sin \theta \div \cos \theta$

d) $\cos \theta \div \sin \theta$

Answer: c) $\sin \theta \div \cos \theta$

4. In a right triangle, if one acute angle is 30 degrees, then the other acute angle will be:

a) 30 degrees

b) 45 degrees

c) 60 degrees

d) 90 degrees

Answer: c) 60 degrees

5. If the value of sin θ is ½, then the value of cos θ will be:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

6. The value of cos 45 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

7. In a right triangle, if one acute angle is 60 degrees, then the other acute angle will be:

a) 30 degrees

b) 45 degrees

c) 60 degrees

d) 90 degrees

Answer: a) 30 degrees

8. If the value of cos θ is √3/2, then the value of sin θ will be:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

9. The value of sin 30 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: a) ½

10. If the value of tan θ is 1/√3, then the value of cos θ will be:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: a) ½

11. In a right triangle, the ratio of the length of the side adjacent to an acute angle to the length of the hypotenuse is called:

a) Sine

b) Cosine

c) Tangent

d) Secant

Answer: b) Cosine

12. Which trigonometric ratio is equal to the reciprocal of the sine function?

a) Cosine

b) Secant

c) Tangent

d) Cosecant

Answer: d) Cosecant

13. The value of sin 60 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: d) √3/2

14. If the value of tan θ is 1, then the value of cot θ will be:

a) 1

b) 0

c) -1

d) Undefined

Answer: a) 1

15. In a right triangle, the square of the length of the hypotenuse is equal to the sum of the squares of the lengths of the other two sides. This is known as:

a) Pythagoras' theorem

b) Trigonometric identity

c) Quadratic equation

d) Logarithmic property

Answer: a) Pythagoras' theorem

16. The value of cos 30 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: a) ½

17. The value of tan 45 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

18. If the value of sin θ is 0.6, then the value of cos θ will be:

a) 0.4

b) 0.6

c) 0.8

d) 1.0

Answer: a) 0.4

19. The value of cos 60 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: a) ½

20. If the value of tan θ is 0, then the value of sin θ will be:

a) 1

b) 0

c) -1

d) Undefined

Answer: b) 0

21. In a right triangle, the ratio of the length of the side opposite to an acute angle to the length of the hypotenuse is called:

a) Sine

b) Cosine

c) Tangent

d) Cosecant

Answer: a) Sine

22. Which trigonometric ratio is equal to the reciprocal of the cosine function?

a) Sine

b) Secant

c) Tangent

d) Cosecant

Answer: b) Secant

23. The value of sin 45 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

24. If the value of cot θ is √3, then the value of tan θ will be:

a) 1/√3

b) √3

c) 1/√2

d) ½

Answer: a) 1/√3

25. In a right triangle, the ratio of the length of the side opposite to the right angle to the length of the hypotenuse is equal to:

a) 0

b) 1

c) Undefined

d) Infinity

Answer: a) 0

26. The value of cos 0 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: a) 1

27. The value of sin 90 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: a) 1

28. If the value of sin θ is 0.8, then the value of cos θ will be:

a) 0.2

b) 0.4

c) 0.6

d) 0.8

Answer: b) 0.4

29. The value of cos 90 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: b) 0

30. If the value of tan θ is ½, then the value of cot θ will be:

a) ½

b) 2

c) 3/2

d) Undefined

Answer: b) 2

31. In a right triangle, the ratio of the length of the side adjacent to an acute angle to the length of the side opposite to that angle is called:

a) Sine

b) Cosine

c) Tangent

d) Cosecant

Answer: c) Tangent

32. Which trigonometric ratio is equal to the reciprocal of the tangent function?

a) Sine

b) Cosine

c) Cotangent

d) Cosecant

Answer: c) Cotangent

33. The value of tan 30 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: a) ½

34. If the value of sin θ is 1, then the value of cosec θ will be:

a) 1

b) 0

c) -1

d) Undefined

Answer: a) 1

35. In a right triangle, the ratio of the length of the side opposite to an acute angle to the length of the side adjacent to that angle is called:

a) Sine

b) Cosine

c) Tangent

d) Cotangent

Answer: d) Cotangent

36. The value of cos 180 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: c) -1

37. The value of sin 180 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: b) 0

38. If the value of cos θ is 0.5, then the value of sec θ will be:

a) 1

b) 2

c) 1.5

d) 0.5

Answer: b) 2

39. The value of tan 45 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

40. If the value of sin θ is -0.6, then the value of cosec θ will be:

a) -0.6

b) -1.67

c) 0.6

d) 1.67

Answer: b) -1.67

41. In a right triangle, the ratio of the length of the side adjacent to an acute angle to the length of the hypotenuse is called:

a) Sine

b) Cosine

c) Tangent

d) Secant

Answer: b) Cosine

42. The value of cos 45 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √2/2

43. If the value of tan θ is 0.8, then the value of cot θ will be:

a) 1.25

b) 1.2

c) 0.8

d) 0.625

Answer: a) 1.25

44. In a right triangle, if one acute angle is 60 degrees, then the other acute angle will be:

a) 30 degrees

b) 45 degrees

c) 60 degrees

d) 90 degrees

Answer: a) 30 degrees

45. The value of sin 0 degrees is equal to:

a) 1

b) 0

c) -1

d) Undefined

Answer: b) 0

46. If the value of cos θ is 0, then the value of sin θ will be:

a) 1

b) 0

c) -1

d) Undefined

Answer: a) 1

47. The value of tan 60 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: d) √3/2

48. If the value of cot θ is ¾, then the value of tan θ will be:

a) 4/3

b) ¾

c) 1/3

d) 3/5

Answer: a) 4/3

49. The value of cos 30 degrees is equal to:

a) ½

b) √2/2

c) 1/√2

d) √3/2

Answer: b) √3/2

50. If the value of sin θ is -1/2, then the value of cosec θ will be:

a) -2

b) -1

c) 2

d) 1

Answer: c) 2