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Practice **Set 3**

Trigonometry

MATERIAL

Topics :

1. Units of Angles (degree and radian) 2. Trigonometric Functions 3. Periods of Trigonometric functions 4. Allied & Compound Angles, Multiple –Submultiples angles 5. Sum and factor formula

DDCE final exam weightage of this topic : 3 Questions (6 Marks)

Total Practice sets of this topic :

$8 \text{ (sets) } \times 25 \text{ (questions) } = 200 \text{ Questions}$

Total Practice tests of this topic :

$2 \text{ (exams) } \times 30 \text{ (questions) } = 60 \text{ Questions}$

Offline / Online during lecture :

$4 \text{ (lectures) } \times 50 \text{ (Questions) } = 200 \text{ Question}$

Total 460 Questions to practice this topic



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Section 2:

Topic 2: Trigonometry

1. Convert 200° to radians.

- a. $\frac{10\pi}{9}$
- b. π
- c. $\frac{9}{10\pi}$
- d. 10π

2. How many degrees are there in a full circle?

- a. 0°
- b. 90°
- c. 180°
- d. 360°

3. $135^\circ =$ _____ radian.

- a. $\frac{\pi}{4}$
- b. $\frac{3\pi}{4}$
- c. $\frac{5\pi}{4}$
- d. $\frac{5\pi}{6}$

4. $\frac{2\pi}{9} =$ _____ degree.

- a. 40
- b. 80
- c. 10
- d. 20





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Section 2:

Topic 2: Trigonometry

5. Convert 150° to radians.

- a. $\frac{3\pi}{4}$
- b. $\frac{5\pi}{6}$
- c. $\frac{7\pi}{9}$
- d. π

6. $225^\circ =$ _____ radian.

- a. $\frac{5\pi}{4}$
- b. $\frac{3\pi}{2}$
- c. $\frac{7\pi}{6}$
- d. $\frac{11\pi}{8}$

7. $\frac{5\pi}{4}$ radian = _____ degrees.

- a. 120
- b. 150
- c. 135
- d. 180

8. $\frac{7\pi}{6}$ radians = _____ degrees.

- a. 180°
- b. 210°
- c. 240°
- d. 150°





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Section 2:

Topic 2: Trigonometry

9. Convert 300° to radians.

- a. $\frac{5\pi}{3}$
- b. $\frac{3\pi}{2}$
- c. $\frac{4\pi}{3}$
- d. $\frac{2\pi}{5}$

10. $\frac{3\pi}{2}$ radians = _____ degrees.

- a. 180°
- b. 270°
- c. 300°
- d. 360°

11. $\frac{11\pi}{6}$ radians = _____ degrees.

- a. 300°
- b. 330°
- c. 345°
- d. 360°

12. Convert 240° to radians.

- a. $\frac{3\pi}{2}$
- b. $\frac{4\pi}{3}$
- c. $\frac{5\pi}{4}$
- d. $\frac{7\pi}{6}$





UNITY TRAINING ACADEMY FOR DDCE

Section 2:

Topic 2: Trigonometry

13. What is the principal period of $y = -4\sin(3x/2)$?

- a. $2\pi/3$
- b. $4\pi/3$
- c. $2\pi/1.5$
- d. π

14. What is the principal period of $y = \sec(-2x)$?

- a. π
- b. 2π
- c. $2\pi/2$
- d. Undefined

15. Find the principal period of $y = \cos(2x + \pi/3)$.

- a. 2π
- b. π
- c. $\pi/2$
- d. $2\pi + \pi/3$

16. What is the principal period of $y = 3\cos(x/3)$?

- a. 3π
- b. $\pi/3$
- c. 6π
- d. 2π

17. What is the principal period of the function $y = \sin(5x + \pi)$?

- a. 2π
- b. π
- c. $2\pi/5$
- d. $\pi/5$





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Section 2:

Topic 2: Trigonometry

18. What is the principal period of the function $y = \sin^2 49^\circ + \cos^2 49^\circ$?

- a. 2π
- b. π
- c. $\pi/49^\circ$
- d. undefined

19. Period of $\sin \frac{x}{2} + \cos \frac{x}{5}$ is _____

- a. 10π
- b. 2π
- c. 20π
- d. 5π

20. $\sin 135^\circ =$ _____.

- a. $1/\sqrt{2}$
- b. $-1/\sqrt{2}$
- c. $\sqrt{2}$
- d. $-\sqrt{2}$

21. $\cos \left(\frac{3\pi}{2} + \theta \right) =$ _____.

- a. $\sin \theta$
- b. $\cos \theta$
- c. $-\sin \theta$
- d. $-\cos \theta$





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Section 2:

Topic 2: Trigonometry

22. $\sin \left(\frac{3\pi}{2} + \theta \right) = \underline{\hspace{2cm}}.$

- a. $\sin \theta$
- b. $\cos \theta$
- c. $-\sin \theta$
- d. $-\cos \theta$

23. $\sin \left(\frac{\pi}{2} - \theta \right) = \underline{\hspace{2cm}}.$

- a. $\sin \theta$
- b. $\cos \theta$
- c. $-\sin \theta$
- d. $-\cos \theta$

24. $\cos (\pi + \theta) = \underline{\hspace{2cm}}.$

- a. $\sin \theta$
- b. $\cos \theta$
- c. $-\sin \theta$
- d. $-\cos \theta$

25. $\tan \left(\frac{3\pi}{2} + \theta \right) = \underline{\hspace{2cm}}.$

- a. $\cot \theta$
- b. $-\cot \theta$
- c. $\tan \theta$
- d. $-\tan \theta$

