Pre-AP Precal

Unit 5 Part 2 Review

Name _____ Date _____

1. If $\frac{\pi}{2} < \theta < \pi$ and $\sin\theta = \frac{2}{3}$, then $\sin 2\theta =$

a) $-\frac{4\sqrt{5}}{9}$ b) $\frac{4\sqrt{5}}{9}$ c) $\frac{4}{3}$
d) $-\frac{4}{3}$ e) $\frac{4\sqrt{13}}{13}$

2. If $\cos\theta = \frac{1}{8}$, the positive value of $\sin\frac{\theta}{2}$ is

a) $\dfrac{3}{2}$ b) $\dfrac{\sqrt{7}}{4}$ c) $\dfrac{9}{16}$ d) $\dfrac{3}{4}$

3. If $\cos A = \frac{1}{3}$, then the positive value of $\tan\frac{1}{2}A$ is

a) $\sqrt{2}$ b) $\sqrt{3}$ c) $\dfrac{\sqrt{3}}{3}$ d) $\dfrac{\sqrt{2}}{2}$

4. The expression $\dfrac{\sin 2A}{2\cos^2 A}$ is equivalent to

a) $\sin A$ b) $\tan A$ c) $\cot A$ d) $2\tan A$

5. Which trigonometric function is equivalent to the expression $\dfrac{\sin 2x}{2\sin x}$?

a) $\tan x$ b) $\cot x$ c) $\sin x$ d) $\cos x$

6. For all values of A for which the expressions are defined, $\dfrac{\sin 2A}{\cos A} - \sin A$ is equivalent to

a) 1 b) $\cos A$ c) $\sin A$ d) $2\sin A$

7. The expression $\sin A\cos A + \sin 2A$ is equivalent to

a) $\sin A(\cos A + \sin A)$ b) $\cos A + 2\sin A$
c) $3\sin A\cos A$ d) $\cos A + 2\sin 2A$

8. The expression $\dfrac{\sin 2x}{\sin(-x)}$ is equivalent to

a) $-2\sin x$ b) $2\sin x$
c) $-2\cos x$ d) $2\cos x$

9. In the interval $0 \le \theta < 2\pi$, the number of solutions of the equation $\sin\theta = \cos\theta$ is

a) 1 b) 2 c) 3 d) 4

10. If $\tan\theta = \dfrac{1+\sqrt{3}}{4}$, then angle θ may terminate in Quadrant

a) I or III only b) II or IV only
c) III or IV only d) I, II, III, or IV

11. In the interval $0 \le x < 2\pi$, the solutions of the equation $\sin^2 x = \sin x$ are

a) $0, \frac{\pi}{2}, \pi$ b) $\frac{\pi}{2}, \frac{3\pi}{2}$
c) $0, \frac{\pi}{2}, \frac{3\pi}{2}$ d) $\frac{\pi}{2}, \pi, \frac{3\pi}{2}$

12. Solve for θ, where $(0 \le \theta < 2\pi)$:

$$2\sin^2\theta + \sin\theta = 1$$

Exact values only.

a) $0, \frac{\pi}{2}, \pi$ b) $\frac{\pi}{3}, \frac{2\pi}{3}, \frac{3\pi}{2}$
c) $\frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$ d) $\frac{\pi}{6}, \frac{3\pi}{2}$
e) $0, \frac{\pi}{6}, \frac{5\pi}{6}, \frac{3\pi}{2}$

13. Solve for θ, where $(0 \leq \theta < 2\pi)$:

$$2\cos^2\theta - 5\cos\theta = 3$$

Exact values only.

a) $\frac{2\pi}{3}, \frac{4\pi}{3}$ b) $0, \frac{2\pi}{3}, \frac{4\pi}{3}$

c) $0, \frac{\pi}{2}, \pi$ d) $\frac{\pi}{3}, \frac{5\pi}{3}$

e) $\frac{\pi}{3}, \frac{2\pi}{3}, \pi, \frac{4\pi}{3}, \frac{5\pi}{3}$

Solve.

14. $2\sin^2\theta - 1 = 0$

15. $\csc^2\theta - 2\csc\theta = 0$

16. $2\cos^2\theta + 7\cos\theta = 4$

17. $5 + 4\cos\theta - 4\sin^2\theta = 0$

18. Which value of θ satisfies the equation $2\cos^2\theta - \cos\theta = 0$?

a) $\frac{\pi}{3}$ b) $\frac{\pi}{4}$ c) $\frac{\pi}{6}$ d) 0

19. Which value of θ satisfied the equation $2\sin^2\theta - 5\sin\theta - 3 = 0$?

a) 300° b) 210° c) 150° d) 30°

20. What is one solution of the equation $(\sin x + \cos x)^2 = 2$?

a) $\frac{\pi}{4}$ b) $\frac{\pi}{3}$ c) $\frac{\pi}{2}$ d) 0

21. A solution of the equation $\cos 2\theta + \sin 2\theta = -1$ is

a) 240° b) 135° c) 45° d) -30°

22. For which value of x is the function $f(x) = \frac{1}{1-\tan x}$ undefined?

a) 0 b) π c) $\frac{\pi}{3}$ d) $\frac{\pi}{4}$

23. For which value of x is $\tan(x + 30)^\circ$ undefined?

a) -30 b) 60 c) 150 d) 330

Pre-AP Precal Unit 5 Part 2 Review Baker 11/9/2015

Answer List

1. a	2. b	3. d
4. b	5. d	6. c
7. c	8. c	9. b
10. a	11. a	12. c
13. a	14. $\frac{\pi}{4}, \frac{3\pi}{4}, \frac{5\pi}{4}, \frac{7\pi}{4}$	15. $\frac{\pi}{6}, \frac{5\pi}{6}$
16. $\frac{\pi}{3}, \frac{5\pi}{3}$	17. $\frac{2\pi}{3}, \frac{4\pi}{3}$	18. a
19. b	20. a	21. b
22. d	23. b	

Catalog List

1. APC AC 7	2. NY1 HE 166	3. NY1 HE 49
4. NY1 HE 192	5. NY1 HE 247	6. NY1 HE 88
7. NY1 HE 206	8. NY1 HE 281	9. NY1 HE 282
10. NY1 HE 37	11. NY1 HE 188	12. APC AC 53
13. APC AC 55	14. TRI QD 69	15. TRI QE 2
16. TRI QE 16	17. TRI QE 64	18. NY1 HE 311
19. NY1 HE 288	20. NY1 HE 301	21. NY1 HE 307
22. NY1 HE 286	23. NY1 HE 145	