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 Math 222- Timed exercise -2- (53402)

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ID: \_\_\_\_\_\_\_\_\_\_ Marks:

 **Choose the correct answer**

1. $ \frac{sinα+sinβ}{sin\left(β-α\right)}$ **is equal to**

 **(a)** $\frac{1}{cotα-cotβ}$ **(b)** $\frac{1}{tanα-tanβ}$ **(c)** $\frac{1}{cotα+cotβ}$ **(d)** $\frac{1}{tanα+tanβ}$

1. $ sin\left(\frac{3π-1}{2}\right)$ **is equal to**

 **(a)** $-cos\frac{1}{2}$ **(b)** $cos\frac{1}{2}$ **(c)** $sin\frac{1}{2}$ **(d)** $-sin\frac{1}{2}$

1. $ cos61^{°}sin82^{°}-sin61^{°}cos82^{°}$ **is equal to**

 **(a*)*** $ sin21^{°}$**(b)**$cos21^{°}$**(c)**$sin143^{°}$**(d)**$-sin21^{°}$

1. $cos5x-cos3x$ **is equal to**

 **(a)**$ sin4xsinx$ **(b)** $-2sin4xsinx$ **(c)** $cos4xcosx$ **(d)** $2sin4xsinx$

1. **If**$ cotα=\sqrt{3}$ **and** $cosα<0$ **then**$tan\left(α+\frac{π}{6}\right) $**is equal to**

 **(a)** $\sqrt{3}$ **(b)** $-\sqrt{3}$ **(c)** $\frac{1}{\sqrt{3}}$ **(d)** $-\frac{1}{\sqrt{3}}$

1. $ sin\left(x-\frac{5π}{2}\right)$ **is equal to**

 **(a)** $ cosx$ **(b)** $-cosx$ **(c)** $sinx$ **(d)** $-sinx$

1. $4sin\frac{x}{2}cos\frac{x}{2}$ **is equal to**

 **(a)** $sinx$ **(b)** $2cosx$ **(c)** $2sinx$ **(d)** $-2sinx$

1. **If**$ tanα=-\frac{5}{12}$ **and** $270^{°}<α<360^{°}$ **then the exact value of** $tan\frac{α}{2}$ **is equal to**

 **(a)** $\frac{1}{5}$ **(b)** $-\frac{5}{24}$ **(c)** $-\frac{1}{5}$ **(d)** $\frac{5}{24}$

1. **Suppose two radar stations located 20 miles apart each detect an aircraft between them. The angle of elevation measured by the first station is 35 degrees, whereas the angle of elevation measured by the second station is 15 degrees, then the distance of the aircraft from the second station is approximately equal to**

**(a)** $ 12.53mi$ **(b)** $ 14.98mi$ **(c)** $15.09mi$ **(d) 3.88mi**

1. **A triangular swimming pool measures 40 feet on one side and 65 feet on another side. These sides form an angle that measures 50°, then the length of the third side (to the nearest tenth) is equal to**

**(a)** $ 211ft$ **(b)** $ 112ft$ **(c)** $122$ **(d) None of the previous**