I. **MULTIPLE CHOICE:** WRITE IN THE BLANK SPACE THE LETTER CORRESPONDING TO THE CORRECT RESPONSE. **PLEASE USE <u>ONLY</u> CAPITAL LETTERS**.

1._____ IN WHAT QUADRANT DOES THE ANGLE $\theta = -320°$ LIE?
A. QI B. QII C. QIII D. QIIII E. NONE OF THESE

2. _____ IF THE SIGNUM OF $\cot(\theta)$ IS NEGATIVE, WHAT IS THE SIGNUM OF $\tan(\theta)$?
A. POSITIVE B. NEGATIVE C. ZERO
D. NOT ENOUGH INFORMATION IS GIVEN E. NONE OF THESE.

3. _____ IN WHAT QUADRANT DOES θ LIE IF THE TERMINAL SIDE OF θ PASSES THROUGH THE POINT (-4, –2)?
A. QI B. QII C. QIII D. QIIII E. NONE OF THESE

4. _____ IN WHAT QUADRANT DOES θ LIE IF $\tan(\theta) > 0$ AND $\sin(\theta) < 0$?
A. QI B. QII C. QIII D. QIIII E. NONE OF THESE

5. _____ WHICH OF THE FOLLOWING CONTAINS NO ERRORS?
A. $\csc(\theta) = \frac{r}{x}$ and $\tan(\theta) = \frac{y}{x}$ B. $\csc(\theta) = \frac{r}{y}$ and $\tan(\theta) = \frac{y}{x}$
C. $\sin(\theta) = \frac{r}{x}$ and $\tan(\theta) = \frac{y}{x}$ D. $\sin(\theta) = \frac{y}{r}$ and $\tan(\theta) = \frac{x}{y}$
E. NONE OF THESE

6. _____ WHEN SOLVING THE EQUATION $\sin(\theta) = \frac{\sqrt{3}}{2}$ WHAT IS THE RESULT OF THE QUADRANT CHECK?
A. QI & QIII B. QI & QIIII C. QII & QIII D. QIII & QIIII E. NONE OF THESE

7. _____ WHAT IS THE VALUE OF $\sin(\theta)$ IF THE TERMINAL SIDE OF θ PASSES THROUGH THE POINT (3, –5) ?
A. $\frac{\sqrt{34}}{-5}$ B. $\frac{\sqrt{34}}{3}$ C. $\frac{3}{\sqrt{34}}$
D. NOT ENOUGH INFORMATION IS GIVEN E. NONE OF THESE

8. _____ WHEN SOLVING THE EQUATION $5\sin(\theta) - 10 = -13$ WHAT IS THE RESULT OF THE QUADRANT CHECK?
A. QI & QII B. QI & QIIII C. QII & QIIII D. QIII & QIIII E. NONE OF THESE

9. _____ WHAT IS THE REFERENCE ANGLE FOR $\theta = 100°$?
A. $\theta_R = 10°$ B. $\theta_R = 90°$ C. $\theta_R = 190°$ D. $\theta_R = 80°$ E. NONE OF THESE

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10. IF THE TERMINAL SIDE OF θ PASSES THROUGH THE POINT $(-3, 4)$, FIND THE VALUES OF $\sin\theta)$, $\cos(\theta)$, AND $\tan(\theta)$

11. IN ΔABC, YOU ARE GIVEN $\measuredangle A = 26°$, $\measuredangle C = 90°$, AND SIDE $b = 80$. FIND THE LENGTH OF THE HYPOTENUSE. ROUND YOUR ANSWER TO THE NEAREST **WHOLE NUMBER**.

12. KELLY IS STANDING 54 FEET FROM THE BASE OF A VERTICAL CLIFF. AT THE TOP OF THE CLIFF A RABBIT IS STANDING. THE RABBIT'S ANGLE OF DEPRESSION TO KELLEY IS $72°$. HOW HIGH IS THE RABBIT ABOVE THE BOTTOM OF THE CLIFF? ROUND YOUR ANSWER TO ONE DECIMAL PLACE

13. SOLVE THE TRIANGLE USING THE GIVEN INFORMATION. ROUND ALL VALUES TO ONE DECIMAL PLACE.

GIVEN: $\measuredangle A = 54°$, $\measuredangle C = 90°$, AND SIDE $b = 125$.

14. SOLVE THE TRIANGLE USING THE GIVEN INFORMATION. ROUND ALL **LENGTHS** TO ONE DECIMAL PLACE.

GIVEN: $\measuredangle A = 62°$, $\measuredangle C = 90°$, AND SIDE $c = 130$.

SOLVE EACH EQUAITON IN THE INTERVAL $0° \le \theta < 360°$

15. $5\sin(\theta) - 10 = -13$

16. $\cos(\theta) = -\frac{1}{2}$

17. $\csc(\theta) = \frac{2}{\sqrt{2}}$

18. $2\tan(\theta) + 6 = 22$