

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

1. _____ IN WHAT QUADRANT DOES THE ANGLE $\theta = -320^\circ$ LIE?
 A. QI B. QII C. QIII D. QIII 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. QIII 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. QIII 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. _____ 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

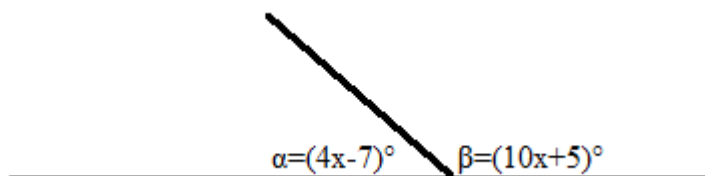
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7. IF THE TERMINAL SIDE OF θ PASSES THROUGH THE POINT $(-3, 4)$, FIND THE VALUES OF $\sin(\theta)$, $\cos(\theta)$, AND $\tan(\theta)$

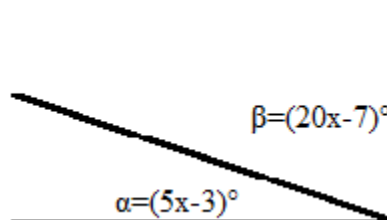
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II. FIND THE MEASURE OF EACH INDICATED ANGLE. FOR ITEM #9 ASSUME THE RIGHT ANGLE.

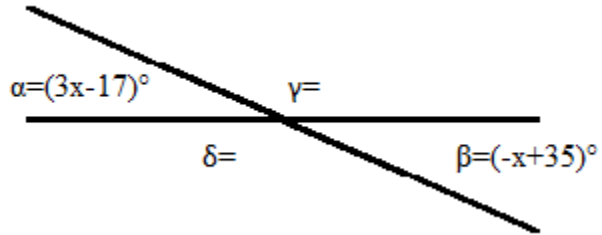
8.



9.



10.



III. ASSUME θ IS A STANDARD POSITION ANGLE MEASURED IN DEGREES WITH $0^\circ \leq \theta < 360^\circ$ AND THAT THE TERMINAL SIDE OF θ PASSES THROUGH THE GIVEN POINT. FIND THE VALUES OF THE SIX TRIGONOMETRIC FUNCTIONS. EXPRESS YOUR ANSWERS AS EXACT VALUES.

11. $(7, -3)$

12. $(-10, -24)$

III. VERIFY THE IDENTITY:

13. $\cot(\theta) = \frac{1}{\tan(\theta)}$