**Chapter 4 TEST**

**Part I – Calculator allowed**

**Multiple Choice [3]**

**\_\_\_\_ 1.** The exact radian measure for an angle of 255° is

|  |  |  |  |
| --- | --- | --- | --- |
| **A.** |  | **C.** |  |
| **B.** |  | **D.** |  |

**\_\_\_\_ 2.** Determine the measure of the angle in standard position shown on the graph below. Round your answer to the nearest tenth of a degree.



|  |  |  |  |
| --- | --- | --- | --- |
| **A.** | 161.6° | **C.** | 71.6° |
| **B.** | 18.4° | **D.** | 1.3° |

**Problem**

 **3.** Darren cuts a slice from his circular birthday cake, which has a diameter of 30 cm. The slice is in the shape of a sector with arc length 8 cm. What is the measure of the central angle of the slice, in degrees, rounded to one decimal place? [2]

 **4.** Solve the following equation on the specific internval: [3]
$$csc^{2}θ-3cscθ=0, 0\leq θ\leq 360°$$

 **5.** Consider A such that cos A = . [5]

**a)** In which quadrant(s) can this angle be?

**b)** If the sine of this angle is negative, in which quadrant is the angle?

**c)** Sketch a diagram to represent the angle in standard position, given that the condition in part b) is true.

**d)** Find the coordinates of a point on the terminal arm of the angle.

**e)** Write exact expressions for the other two primary trigonometric ratios for the angle.

**Chapter 4 TEST
Part II – NO Calculator allowed**

**Multiple Choice [4]**

*Identify the choice that best completes the statement or answers the question.*

**\_\_\_\_ 6.**  radians is equal to how many degrees?

|  |  |  |  |
| --- | --- | --- | --- |
| **A.** | 240° | **C.** | 420° |
| **B.** | 150° | **D.** | 330° |

**\_\_\_\_ 7.** Which graph represents an angle in standard position with a measure of  rad?

|  |  |  |  |
| --- | --- | --- | --- |
| **A.** |  | **C.** |  |
| **B.** |  | **D.** |  |

**\_\_\_\_ 8.** Identify the point on the unit circle corresponding to an angle of  radians in standard position.

|  |  |  |  |
| --- | --- | --- | --- |
| **A.** | (, ) | **C.** | (, ) |
| **B.** | (, ) | **D.** | (, ) |

**\_\_\_\_ 9.** Identify a measure for the central angle  in the interval  such that point ( ) is on the terminal arm.

|  |  |  |  |
| --- | --- | --- | --- |
| **A.** |  | **C.** |  |
| **B.** |  | **D.** |  |

**Short Answer**

 **10.** Determine the exact value of  . [1.5]

 **11.** Angle A is located in quadrant II and angle B is such that $π\leq B\leq 2π$. If $sin A= \frac{\sqrt{2}}{2} $ and , determine the exact value of sec A + csc B. [1.5]

**12.** Solve the following equations on the specific intervals:

 a) $4cos^{2}θ=3 , 0\leq θ<2π$ [3]

 b) $2sinθ+ \sqrt{3}=0$ , general solution. [3]

 c) $2cos^{2}θ-5cosθ+2=0, -π\leq θ\leq 2π$ [3]