**Trigonometry: Functions**

**RETEST**

**Name**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Convert radians to degrees.

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| --- | --- | --- | --- |
| A: 60o | B: 120o | C: 240o | D: 480o |

1. The terminal arm of angle in standard position intersects the unit circle at the point (m, n). Which expression represents tan?

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| --- | --- | --- | --- |
| A: | B: | C: | D: |

1. Determine the exact value of csc .

|  |  |  |  |
| --- | --- | --- | --- |
| A: | B: - | C: | D: - |

1. If cot = - and sin < 0, determine the exact value of sec .

|  |  |  |  |
| --- | --- | --- | --- |
| A: - | B: - | C: | D: |

1. Determine the amplitude of the function y = -4 sin 3x – 2.

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| A: -4 | B: -2 | C: 2 | D: 4 |

1. Given the graph of the function y = *a* sin *b*(x – *c*) + *d* below, determine the value of *b*.
2. Give the range of y = 5sin x + 8.

A. -13 y -3 B. 3 y 13

C. -13 y 13 D. 3 y 8

1. At a seaport, the water has a maximum depth of 18 m at 3:00 am. After this maximum depth, the first minimum depth of 4 m occurs at 9:30 am. Assume that the relation between the depth, *h* meters, and the time, *t* hours, is a sinusoidal function. Determine the equation for *h* at any time *t*.

A. y = 7cos (t – 3) + 11 B. y = 7cos (t – 3) + 11

C. y = 7cos (t – 3) + 7 D. y = 7cos (t – 3) + 7

1. Determine the period of y = tan x.
2. An arc of length 5 cm subtends an angle of 30o at the centre of a circle with radius *r*. Determine the value of *r*.
3. A minimum value of a sinusoidal function is at . The nearest maximum value to the right of this point is at . Determine an equation of this function.