Algebra 2 w/ Trig

9.4 Evaluate Inverse Trigonometric Functions

Warm-Up:

**Evaluate** **the expression.**

**1.**  **2**. ) **3**.

**4.** **5.**

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Example 1: Evaluate Inverse Trigonometric Functions

**Evaluate the expression in both radians and degrees.**

1. b. c.

Example 2: Solve a Trigonometric Equation

**Solve the equation**   **where**

YOU TRY:

**Evaluate the expression in both radians and degrees.**

1. 2.

3. 4. )

**Solve the equation for**

**5.**  **6.**  **7.**

**8.**  **9.**  **10.**

Example 3: Multiple Choice!!!



Example 4: Write and Solve a Trigonometric Equation

**A monster truck drives off a ramp in order to jump onto a row of cars. The ramp has a height of 8 feet and a horizontal length of** 20 **feet. What is the angle of the ramp?**

YOU TRY:

**Find the measure of the angle .**



**14. WHAT IF? In Example** 4**, suppose a monster truck drives** 26feet **on a ramp before jumping onto a row of cars. If the ramp is** 10 feet **high, what is the angle of the ramp?**

KEEP GOING:

1. **Solve the equation**  **where**
2. **What is the measure of the angle in the triangle shown.**
3. **A ramp goes from the ground to the entrance to a building. If the height of the ramp is** 27 **inches and the horizontal distance is** 58 **inches, what is the angle of the ramp?**

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