Inverse Trigonometric Functions

| Recall: Inverse and | | |
|-----------------------------------|--------------------------|----------|
| Do: find inverse of | find inverse of | |
| | | |
| | | |
| | | |
| | | |
| Recall: Basic Trigonometry Skills | | |
| Do: Construct | Do: sketch one period of | and |
| | one period of | |
| | ↑ | |
| | | |
| | | → |
| | | |
| | l l | |
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| | | |
| | | |
| | | |
| | ' | |
| Notations | | |
| if then | OR | |
| This notation applies to all | functions.] | |

| MAT123 – Precale | culus | Lecture ' | Worksheet | | | Page 2 |
|---|---------------|-------------------|-----------|--------------|----------------|--------|
| | pairs | each other: | ex. | | | |
| similarly: | | | | | | |
| | | | | | | |
| | | | | | | |
| Given | | <i>x</i> (| |) represents | | - |
| | | y (| |) represents | | - |
| ex. when $x = \underline{\hspace{1cm}}$ | , y = | | | | | |
| i.e., | the | n it follows that | | | | |
| On | | , look | c up | | _ to determine | |
| ex. evaluate | | Do: evaluate _ | | _ | | |
| ex. evaluate | | Do: evaluate _ | | _ | | |
| ex. evaluate | | Do: evaluate _ | | _ | | |
| Inverse Sine Grap | ph | | | | | |
| Recall: when a fun | ction's graph | 1 | , it | ts | must be | |
| so i | t can have an | · | | | | |
| restrict | of | to | | so it pas | sses | |

Evaluate Negative Angles with Inverse Sine Function

| Know: | | | | |
|---------------------|----|----------------------------|----------------|--|
| ex. Evaluate | | | | |
| | | | | |
| Technique: | | | | |
| due to the | | of the graph, the answer's | gets | |
| Inverse Cosine Grap | ph | | | |
| restrict | of | to | _ so it passes | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Do: Evaluate | | _ | | |
| Do: Evaluate | | | | |

ex. Evaluate _____

Evaluate Negative Angles with Inverse Cosine Function

| Evaluate regative Angles w | itii iiiveise Cosme Function | |
|----------------------------------|------------------------------|---------|
| Know: | | |
| ex. Evaluate | | |
| | | |
| | | |
| Technique: find a | ngle using its | _ angle |
| Evaluating Composed Inver | rse Trigonometric Functions | |
| ex. Evaluate | | |
| | | |

What is the _____ made by the _____ and the ____?

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Inverse Tangent Graph