|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  SA Transformations of Sine and Cosine  Writing a Function from its Graph  Graphing a Function from its Function | |  |  |  | | --- | --- | --- | | 2nd hour | 3rd hour | 4th hour | | 5th hour | 6th hour | 7th hour | |

Write the equation of the given trigonometric function, answer the related questions, and select the related transformations

|  |  |
| --- | --- |
|  | 1. Write the trigonometric function in the given graph in both formats   General Trigonometric Function  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Translated Trigonometric Function  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Complete the related table

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | Amplitude | Phase shift | Period Length | State implied period |

1. Circle the related transformations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Vertical  Compression | Vertical  Stretch | Vertical  Reflection | Horizontal  Compression | Horizontal  Stretch | Phase Shift LEFT | Phase Shift RIGHT |

Show any related work here

Extra Credit #1:

Which is more special to you and why?

A nice gesture when EXPECTED like your birthday, Valentine’s Day, or an anniversary, or a nice gesture when UNEXPECTED.

|  |  |
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|  | 1. Write the trigonometric function in the given graph in both formats   General Trigonometric Function  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Translated Trigonometric Function  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

1. Complete the related table

|  |  |  |  |  |  |  |  |
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1. Circle the related transformations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Vertical  Compression | Vertical  Stretch | Vertical  Reflection | Horizontal  Compression | Horizontal  Stretch | Phase Shift LEFT | Phase Shift RIGHT |

Show any related work here

Extra Credit #2: Give an example of when you learned a lesson about the nature of friendships you have had in the past. Was this lesson a positive or negative experience?

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| state the translated version of this trigonometric function\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   |  |  |  |  | | --- | --- | --- | --- | | A | B | C | D |   State any extreme value points or intercepts in the IMPLIED period as POINTS when angles are measured in degrees   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Label as Point K on graph below  ( , ) | Label as Point N on graph below  ( , ) | Label as point I on graph below  ( , ) | | Label as point G on graph below  ( , ) | Label as point H on graph below  ( , ) | | State each of these (these depend on A and D)   |  |  |  | | --- | --- | --- | | Range of the function | Midline of the function | Amplitude of the function |   State each of these (these depend on B and C)   |  |  |  | | --- | --- | --- | | Length of ONE PERIOD of the function | Period that is IMPLIED by this function | PHASE Shift of this function  (be certain to state direction and number) | | | | Sketch g(x) label the FIVE important points  (use the letters from above) | | | | |

Circle the related transformations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Vertical  Compression | Vertical  Stretch | Vertical  Reflection | Horizontal  Compression | Horizontal  Stretch | Phase Shift LEFT | Phase Shift RIGHT |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
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1. Complete the related table

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
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1. Circle the related transformations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Vertical  Compression | Vertical  Stretch | Vertical  Reflection | Horizontal  Compression | Horizontal  Stretch | Phase Shift LEFT | Phase Shift RIGHT |

Show any related work here

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|  |  |  |  |  |  |  |  |
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| Vertical  Compression | Vertical  Stretch | Vertical  Reflection | Horizontal  Compression | Horizontal  Stretch | Phase Shift LEFT | Phase Shift RIGHT |

Show any related work here

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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| --- | --- | --- | --- | --- | --- | --- |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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