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| **Chapter 4 (4.4 and 4.5)**: Trigonometric Graphing |
|  | Topics: Graphing sine, cosine, tangent, cotangent, cosecant, and secant functions, parts of graphs (amplitude, period, phase shift, vertical shift), frequency, reflections, graph to equation, and application problems. |

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|  | For each of the following equations graph 2 cycles of the graph and find a. periodb. frequencyc. phase shiftd. vertical shifte. amplitude & reflections |
|  | 1. |  | 2. |  | 3. |  |
|  | 4. |  | 5. |  | 5b. |  |

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| 6. | Write one sine and one cosine equation for this graph. | 7. | Write one cosecant and one secant equation for this graph. |
| 8. | A seagull, bobbing up and down in the water as waves pass it, moves from its highest point to its lowest point in 10 seconds. The distance between the highest and lowest points is 6 feet. What is the period and amplitude of a sinusoidal function that models the seagull’s movement? |
| 9.  | Write a sine equation to model the initial behavior of a sound wave with a frequency of 220 hertz and an amplitude of 0.18? |