Trigonometry
Graphing Trig Functions: Parent Trig Graphs – Homework

If you don't have them in your notebook, sketch the following parent graphs neatly before answering the questions.

$$y = sin\ x \qquad\qquad y = csc\ x$$
$$y = cos\ x \qquad\qquad y = sec\ x$$
$$y = tan\ x \qquad\qquad y = csc\ x$$

1. Name three values of 'x' where the graph $y = \sin x$ crosses the x-axis.

2. How often (in terms of 'x') does the graph $y = \tan x$ have a vertical asymptote?

3. What is the difference between the greatest and least y-values on the graph $y = \cos x$.

4. How often does the graph $y = \sin x$ reach its maximum value?

5. How often does the graph $y = \sin x$ reach its minimum value?

6. Write an expression that describes every x-intercept of the graph $y = \cos x$.

7. How often (in terms of 'x') does the graph $y = \sec x$ have a vertical asymptote?

8. Name three values of 'x' where the graph $y = \csc x$ reaches a local maximum.

9. Why do the graphs $y = \csc x$ and $y = \sec x$ not have points on the x-axis?

10. What is the y-intercept of the graph $y = \tan x$?

11. What is the y-intercept of the graph $y = \cos x$?

12. Name an interval (between two x-values) where the graph $y = \tan x$ is above the x-axis.

13. Name three x-intercepts of the graph $y = \cot x$.

14. What is the y-intercept of the graph $y = \sin x$?

15. Name three values at which the y-value of the graph $y = \tan x$ is one.