

$y = \sin \theta$

1. Is the sine graph a function? (Hint: Use the vertical line test) _____

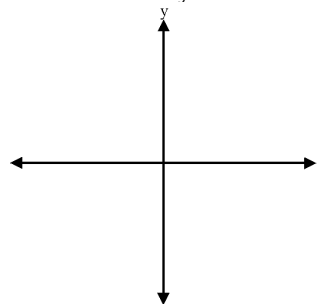
2. At what degree measure(s) does sine reach its maximum height? _____
3. What is the maximum height of the sine graph? (Remember your unit circle values) _____
4. At what degree measure(s) does sine reach its minimum height? _____
5. What is the minimum height of the sine graph? (Remember your unit circle values) _____
6. Where is the value of sine equal to zero? _____
7. Looking at the sine graph, is there any angle measure where the sine graph begins to repeat? If so, where?

8. Is the sine ever undefined? If so, where? _____
9. Looking at the domain of sine (*degree measures*) and question 8, are there any angle measures that are excluded from the domain? If so, what are they? _____
10. Using your answer from 9, write the domain of sine. _____
11. Look at the range of sine (*y - values*). Using your answers from 3 and 5 to write the range of sine.

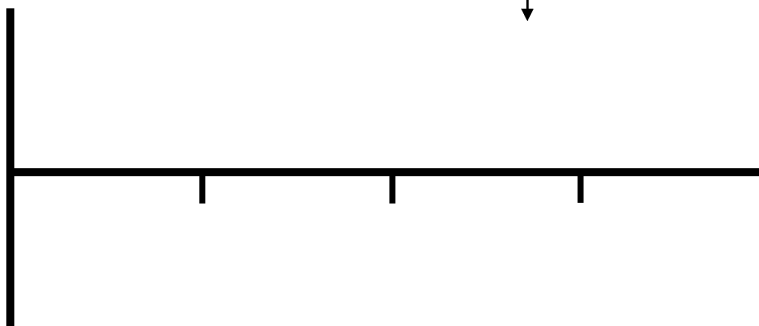
12. Complete the table below for $y = \sin \theta$

θ	y
0°	
90°	
180°	
270°	
360°	

13. Mark positives and negatives for sine in the coordinate system below.



14. Sketch a graph of sine from the table.



$$y = \csc \theta$$

- Is the cosecant graph a function? How can you tell? _____

- What is the maximum height of the cosecant graph? _____
- What is the minimum height of the cosecant graph? _____
- Where is the value of cosecant undefined? Why does this occur? _____

- Looking at the cosecant graph, is there any angle measure where the cosecant begins to repeat? If so, where? _____
- Looking at the domain of cosecant (*degree measures*) and question 4 are there any angle measures that are excluded from the domain? If so, what are they? _____
- Using your answer from 6, write the domain of cosecant. _____
- Looking at the range of cosecant (*y – values*) are there any y-values that are excluded from the range? _____

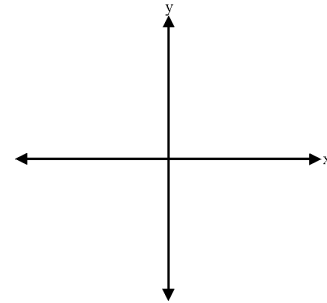
- Using your answers from 2, 3, and 8, write the range of cosecant. _____

10. Complete the table below for $y = \csc \theta$

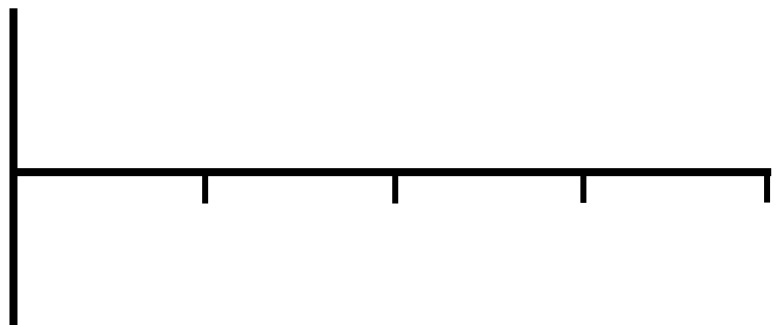
below.

θ	y
0°	
90°	
180°	
270°	
360°	

11. Mark positives and negatives for cosecant in the coordinate system



12. Sketch a graph of cosecant from the table.



$y = \cos \theta$

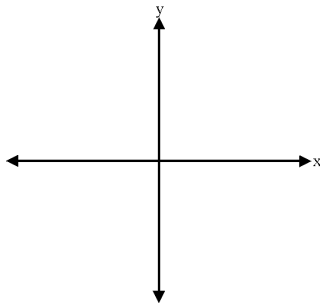
1. Is the cosine graph a function? How can you tell? _____

2. At what degree measure(s) does cosine reach its maximum height? _____
3. What is the maximum height of the cosine graph? (Remember your unit circle values) _____
4. At what degree measure(s) does cosine reach its minimum height? _____
5. What is the minimum height of the cosine graph? (Remember your unit circle values) _____
6. Where is the value of cosine equal to zero? _____
7. Looking at the cosine graph, is there any angle measure where the cosine graph begins to repeat? If so, where? _____
8. Is the cosine ever undefined? If so, where? _____
9. Looking at the domain of cosine (*degree measures*) and question 8 are there any angle measures that are excluded from the domain? If so, what are they? _____
10. Using your answer from 9, write the domain of cosine. _____
11. Look at the range of sine (*y - values*). Using your answers from 3 and 5 to write the range of cosine. _____

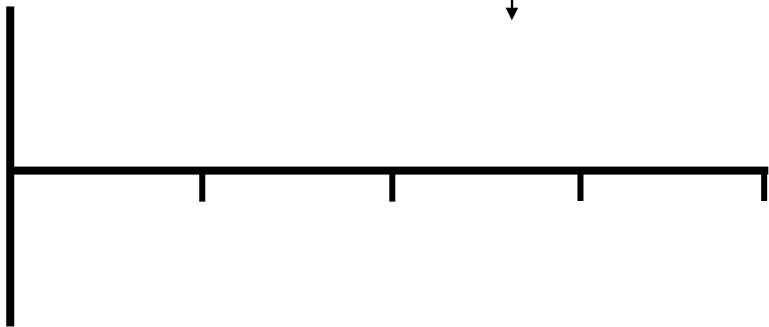
12. Complete the table below for $y = \cos \theta$

θ	y
0°	
90°	
180°	
270°	
360°	

13. Mark positives and negatives for cosine in the coordinate system below.



14. Sketch a graph of cosine from the table.



$$y = \sec \theta$$

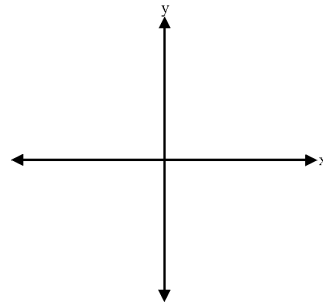
- Is the secant graph a function? How can you tell? _____

- What is the maximum height of the secant graph? _____
- What is the minimum height of the secant graph? _____
- Where is the value of secant undefined? Why does this occur? _____

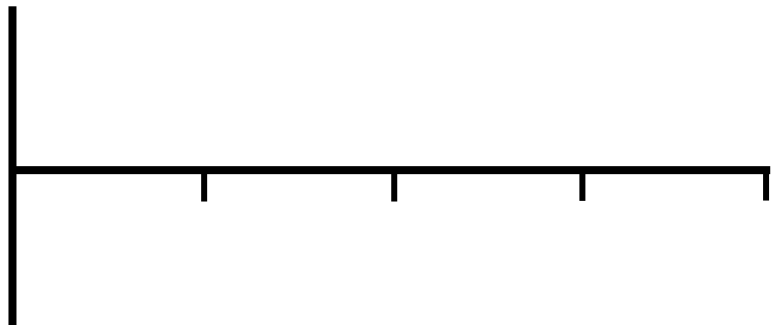
- Looking at the secant graph, is there any angle measure where the secant begins to repeat? If so, where? _____
- Looking at the domain of secant (*degree measures*) and question 4 are there any angle measures that are excluded from the domain? If so, what are they? _____
- Using your answer from 6, write the domain of secant. _____
- Looking at the range of secant (*y – values*) are there any *y*-values that are excluded from the range? _____
- Using your answers from 2, 3, and 8, write the range of secant. _____
- Complete the table below for $y = \sec \theta$

θ	y
0°	
90°	
180°	
270°	
360°	

- Mark positives and negatives for secant in the coordinate system below.



- Sketch a graph of secant from the table.



$$y = \tan \theta$$

1. Is the tangent graph a function? How can you tell? _____

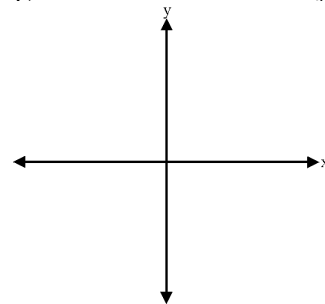
2. What is the maximum height of the tangent graph? _____
3. What is the minimum height of the tangent graph? _____
4. Where is the value of tangent equal to zero? Why does this occur? _____

5. Is the tangent ever undefined? If so, where? _____
6. Looking at the tangent graph, is there any angle measure where the tangent graph begins to repeat? If so, where? _____
7. Looking at the domain of tangent (*degree measures*) are there any angle measures that are excluded from the domain? If so, what are they? _____
8. Using your answer from 7, write the domain of tangent. _____
9. Looking at the range of tangent (*y – values*) are there any y-values that are excluded from the range? If so, what are they? _____
10. Using your answers from 2, 3, and 9, write the range of tangent. _____

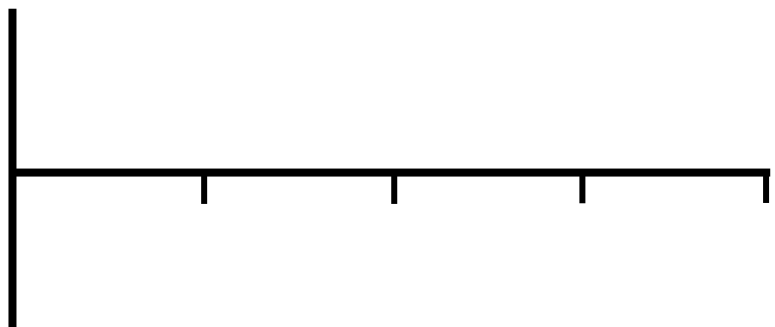
11. Complete the table below for $y = \tan \theta$

θ	y
0°	
90°	
180°	
270°	
360°	

12. Mark positives and negatives for tangent in the coordinate system below.



13. Sketch a graph of tangent from the table.



$$y = \cot \theta$$

1. Is the cotangent graph a function? How can you tell? _____

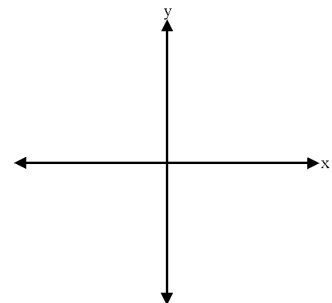
2. What is the maximum height of the cotangent graph? _____
3. What is the minimum height of the cotangent graph? _____
4. Where is the value of cotangent equal to zero? Why does this occur? _____

5. Is the cotangent ever undefined? If so, where? _____
6. Looking at the cotangent graph, is there any angle measure where the cotangent graph begins to repeat? If so, where? _____
7. Looking at the domain of cotangent (*degree measures*) are there any angle measures that are excluded from the domain? If so, what are they? _____
8. Using your answer from 7, write the domain of cotangent. _____
9. Looking at the range of cotangent (*y – values*) are there any *y*-values that are excluded from the range? If so, what are they? _____
10. Using your answers from 2, 3, and 9, write the range of cotangent. _____

11. Complete the table below for $y = \cot \theta$

θ	y
0°	
90°	
180°	
270°	
360°	

12. Mark positives and negatives for cotangent in the coordinate system below.



13. Sketch a graph of cotangent from the table.

