

Unit 2 Test - Limits

Part 1 Multiple Choice (No Calculator)

20 Questions

- Limits from a graph
- Limits where you can use direct substitution
- Limits
 - factor and cancel first
 - conjugate
 - simple trig identities

$$\cot \theta = \frac{\cos \theta}{\sin \theta} \quad \sec \theta = \frac{1}{\cos \theta}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} \quad \csc \theta = \frac{1}{\sin \theta}$$

(special Δ 's)

$$\cot \theta = \frac{1}{\tan \theta}$$

- Special Trig limits 2.6
- Limits to ∞
Divide all terms by highest power in denominator
- Limits from left and right
- Limits with absolute values

$$\lim_{x \rightarrow 0} \frac{|x|}{x}$$

(Draw the function)
- Find horizontal Asymptote
limit as $x \rightarrow \infty$
- Discontinuities
Denominator = 0

6 sides
of paper

- Discontinuities
Denominator = 0

$f(g(x))$ - Make the composite function first

- Continuous function from a piecewise function
- Use algebra to manipulate a function then evaluate the limit:

Part 2 - Show all work (Use a graphing calculator)

2 sides
of paper

1. Squeeze theorem (Use it) (3)
2. Explain why the limit does not exist (2)
3. IVT (3)
Function is continuous
 $f(a) < 0 < f(b)$ (2.8)
4. Special trig limits (4)
 $\sin^2 \theta + \cos^2 \theta = 1$
5. continuity (3)
same as tech Lab
1.
2.
3.