

QUESTION	VALUE	SCORE
1	20	
2	20	
3	20	
4	20	
5	20	
TOTAL	100	

Trig formulas

- $\sin^2 \theta + \cos^2 \theta = 1$
- $\tan^2 \theta + 1 = \sec^2 \theta$
- $\cot^2 \theta + 1 = \csc^2 \theta$
- $\sin(2\theta) = 2 \sin \theta \cos \theta$
- $\sin^2 \theta = \frac{1}{2}(1 - \cos(2\theta))$
- $\cos^2 \theta = \frac{1}{2}(1 + \cos(2\theta))$
- $\sin(a + b) = \sin(a) \cos(b) + \cos(a) \sin(b)$
- $\cos(a + b) = \cos(a) \cos(b) - \sin(a) \sin(b)$
- $\sin(a) \cos(b) = \frac{1}{2}[\sin(a - b) + \sin(a + b)]$
- $\sin(a) \sin(b) = \frac{1}{2}[\cos(a - b) - \cos(a + b)]$
- $\cos(a) \cos(b) = \frac{1}{2}[\cos(a - b) + \cos(a + b)]$

Integration by parts formulas:

- $\int u dv = uv - \int v du$
- $\int \tan x dx = \ln |\sec x| + C$
- $\int \sec x dx = \ln |\sec x + \tan x| + C$