

Math 2222 Formula Sheet for Test 1 (FS 2015)

These formulas will be given to you on the cover page for Test 1. Do not bring this sheet with you; this is for your information.

$$L = \int_{\alpha}^{\beta} \sqrt{(f(\theta))^2 + (f'(\theta))^2} d\theta$$

$$\mathbf{N} = \frac{\mathbf{T}'}{|\mathbf{T}'|}; \quad \mathbf{B} = \mathbf{T} \times \mathbf{N}$$

$$\kappa(t) = \frac{|\mathbf{T}'(t)|}{|\mathbf{r}'(t)|} = \frac{|\mathbf{v} \times \mathbf{a}|}{|\mathbf{v}|^3}; \quad a_N = \frac{|\mathbf{v} \times \mathbf{a}|}{|\mathbf{v}|}$$