

FORMULA SHEET FOR MATH 442 FINAL EXAM

Law of Sines:

$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

Law of Cosines:

$$c^2 = a^2 + b^2 - 2ab \cos C$$

Area of a triangle

$$Area = \frac{1}{2} ab \sin C$$

Pythagorean Identities:

$$\sin^2 x + \cos^2 x = 1$$

$$1 + \tan^2 x = \sec^2 x$$

$$1 + \cot^2 x = \csc^2 x$$

Formulas for sequences:

$$a_n = a_1 + (n-1)d$$

$$S_n = \frac{n}{2}(a_1 + a_n)$$

$$a_n = a_1 r^{n-1}$$

$$S_n = \frac{a_1(1-r^n)}{1-r}$$

Standard deviation:

$$s = \sqrt{\frac{1}{n-1} \sum (x_i - \bar{x})^2}$$