



Substitution We Then Use The Substitution  $u = \cos x$   
 $du = -\sin x dx$  to get  $\int \sin^5 x \cos^2 x dx = \int u^2 (2u^4 + u^6) du = \frac{2}{5} u^5 + \frac{1}{7} u^7 + C = \frac{2}{5} \cos^5 x + \frac{1}{7} \cos^7 x + C$

Example 310 Find  $\int \sin^2 x dx$  This Is The Case When The Powers Of Sine And Cosine Are Even (the Power Of Cosine Being 0). We Use May 9th, 2024

**Q= 0.4 TRIGONOMETRIC AND INVERSE TRIGONOMETRIC ...2 R T 2 1 0 1 -I 0 SECTION 0.4 1**

**Trigonometric And Inverse Trigonometric Functions 35**

**Angle In Degrees  $0^\circ$   $30^\circ$   $45^\circ$   $60^\circ$   $90^\circ$   $135^\circ$   $180^\circ$   $270^\circ$   $360^\circ$  1**

**Angle In Radians 0  $\frac{\pi}{6}$   $\frac{\pi}{4}$   $\frac{\pi}{3}$   $\frac{\pi}{2}$   $\frac{2\pi}{3}$   $\frac{3\pi}{4}$   $\pi$   $\frac{5\pi}{4}$   $\frac{3\pi}{2}$   $\frac{7\pi}{4}$   $2\pi$  2**

**THEOREM 4.1 The Functions  $f(x) = \sin x$  and  $g(x) = \cos x$  are periodic with period  $2\pi$ .**

**2024 Functions: Parent Functions, Characteristics Of Functions ... Special Characteristics Of Functions 1.**

**1. Domain - The Set Of All Inputs (x-values) That "work" In The Function**

**2. Range - The Set Of All Outputs (y-values) That Are Possible For The Function**

**3. Extrema - Maximum And Minimum Points On A Graph**

**4. Zero (X-Intercept) - The Points At Which A Graph Crosses The X-axis**

**5. Y-Intercept - The Point At Which A Graph Crosses The Y-axis** Apr 8th, 2024.

**Linear Functions Exponential Functions Quadratic Functions**

**Linear Functions Exponential Functions Quadratic Functions Rates = Linear Versus Exponential**

**M Constant Rate Of Change (CRC) Changes By A Constant Quantity Which Must Include Units. EX: The Population Of A Town Was 10,000 In 2010 And Grew By 200 People Per Year.  $M = \text{CRC} = +20$**  May 7th, 2024

**Trigonometric Functions, Equations &**

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Mathematicsvisionproject.org 7.1 High Noon And  
Sunset Shadows - Teacher Notes A Develop  
Understanding Task Jan 12th, 2024 Trigonometric  
Formula Sheet De Nition Of The Trig  
Functions Trigonometric Formula Sheet De Nition Of  
The Trig Functions Right Triangle De Nition Assume  
That:  $0 <$