

Spring 2017

Final Exam Topics

- Angle Relationships (Ch. 4)

- * Angle classifications

- (ie: acute, obtuse, scalene, etc.)

- * Solve for missing sides and angles

- * Isosceles and Equilateral Triangles

- Special Right Triangles (Ch. 8-3)

- * 45-45-90 (aka: Isosceles right \triangle)

- * 30-60-90 (aka: Scalene right \triangle)

- Pythagorean Theorem (Ch. 8-2)

- * Simplifying radicals

- Trigonometry (Ch. 8-4/8-5)

- * Sine, cosine, tangent

- * Angles of Elevation/Depression

- Algebra Prep

- * Multiplying polynomials

- * Factoring

- * Rules/properties of Exponents

- Volume

- * Rectangular Prisms ($V = l \cdot w \cdot h$)

- * Cylinders ($V = \pi r^2 h$)

Point-slope

$$y - y_1 = m(x - x_1)$$

Angle Classifications

- acute angle ($< 90^\circ$)
- obtuse angle ($> 90^\circ$)
- right angle (~~9~~ exactly 90°)
- Vertical angles (\cong)
- Complementary angles (90°)
- supplementary angles (180°)
(linear pair)
- Alt Int/Ext Angles (\cong)
- Consecutive Int Angles (180°)
- Corresponding Angles (\cong)

Important Formulas

Triangle Angle Sum

$$\angle A + \angle B + \angle C = 180^\circ \text{ (Sec)}$$

Exterior Angle Theorem

$$\text{Ext Angle} = \text{Remote Int Angle 1} + \text{Remote Int Angle 2}$$

Distance Formula

$$d = \sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

Midpoint

$$M = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Slope

$$m = \frac{y_1 - y_2}{x_1 - x_2} \text{ or } \frac{y_2 - y_1}{x_2 - x_1}$$

Slope-intercept

$$y = mx + b$$