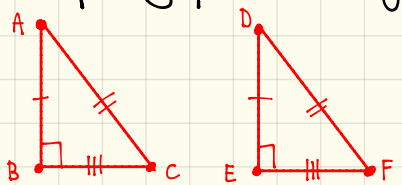


STEM Accelerated Analytic Geometry Unit 2 Triangles Study Guide

1. Know about vertical, supplementary, complementary angles & angle bisectors. [2.1]
2. Be able to apply knowledge on vertical, supplementary, complementary & angle bisectors. [2.1]
3. Know when parallel lines are cut by a transversal, the special angles that are created — vertical, corresponding, alternate interior, alternate exterior, linear pair, same side interior, same side exterior [2.2]
4. Understand the meaning behind 2 triangles being congruent — corresponding parts are congruent. [2.3]



$$\triangle ABC \cong \triangle DEF$$

← note:
order of the
statement matters

Sides

$$\begin{aligned}\overline{AB} &\cong \overline{DE} \\ \overline{BC} &\cong \overline{EF} \\ \overline{AC} &\cong \overline{DF}\end{aligned}$$

Angles

$$\begin{aligned}\angle A &\cong \angle D \\ \angle B &\cong \angle E \\ \angle C &\cong \angle F\end{aligned}$$

5. Know the postulates for proving 2 triangles congruent — SSS, SAS, ASA, AAS, HL [2.3]

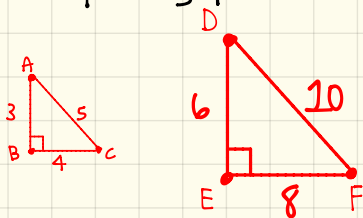
6. Be able to prove using theorems that 2 triangles are congruent or corresponding parts are congruent. [2.4]

7. Know the Triangle Sum Theorem & Exterior Angle Theorem [2.5]

8. Be able to calculate dilation factors on Cartesian Plane [2.6]

9. Understand that figures dilated (compressed or expanded) means the figures are similar [2.6, 2.7]

10. Understand the meaning behind 2 triangles being similar — corresponding parts are proportional [2.7]



$$\triangle ABC \sim \triangle DEF$$

$$\frac{AB}{DE} = \frac{BC}{EF} = \frac{AC}{DF}$$

$$\frac{3}{6} = \frac{4}{8} = \frac{5}{10}$$

$$\frac{1}{2} = \frac{1}{2} = \frac{1}{2}$$

11. Know the Triangle Midsegment Theorem & Base Angle Theorem and be able to apply the theorems [2.8]

12. Know the trigonometric ratios [2.9]

A good way to memorize is SOH-CAH-TOA! Sounds like an indian word ☺

$$\sin \theta = \frac{\text{opposite}}{\text{hypotenuse}}$$

$$\cos \theta = \frac{\text{adjacent}}{\text{hypotenuse}}$$

$$\tan \theta = \frac{\text{opposite}}{\text{adjacent}}$$

13. Be able to apply trigonometric ratios to find missing sides on a right triangle.

14. Be able to apply trigonometric ratios to find missing angles on a right triangle.

Test Format 90 minute examination

Section 1 — Multiple Choice — about 20-30 questions [55 minutes]

Section 2 — Free Response — about 5-7 questions [35 minutes]