

Geometry: 3.2 Parallel Lines and Transversals

Work on your Exploratory Activity regarding Parallel lines. You'll have about 15 minutes to work on it. After that, we'll do a debrief over it and cover a few slides, then you'll have homework from the textbook.

Our Findings:

Given parallel lines cut by a transversal...

Corresponding angles are Congruent

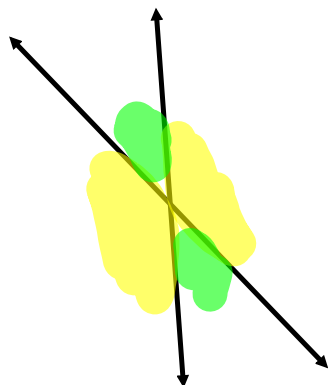
Alternate Interior angles are Congruent

Consecutive Interior angles are Supplementary

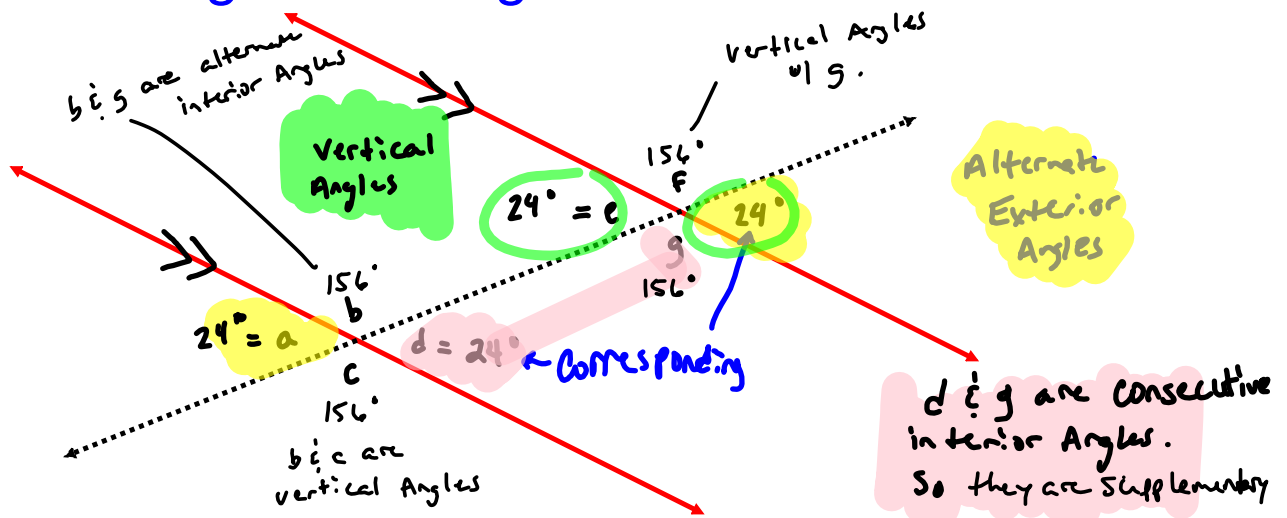
Alternate Exterior angles are Congruent

Extra refresher...

Vertical angles are congruent

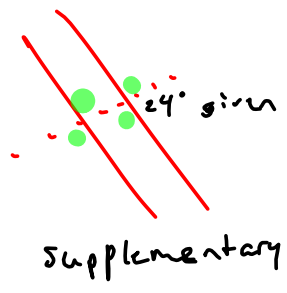
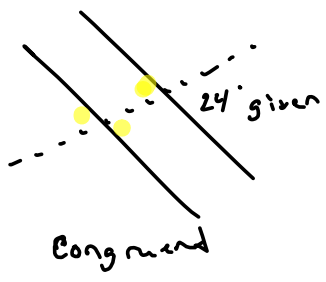


Given just ONE angle you can find EVERY other angle in the figure!



Find all missing angles and justify your answers.

$$\begin{array}{r} 24 + g = 180 \\ -24 \quad -24 \\ \hline g = 156^\circ \end{array}$$



Lesson 3.2 Parallel Lines and Transversals

Solve for x.

115°

115° (x+5)°

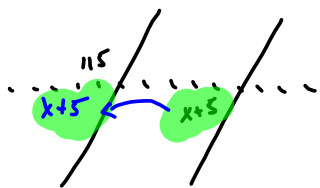
Consecutive Interior Angles

Supplementary

$$115 + x + 5 = 180$$
$$120 + x = 180$$
$$\begin{array}{r} -120 \\ -120 \end{array}$$

$x = 60^\circ$

you could have done this



115

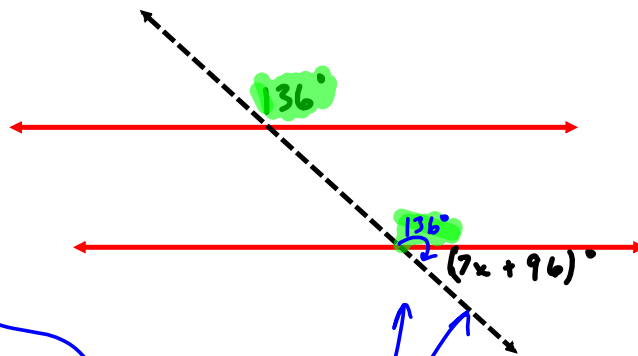
x+5

Form a straight Angle.

$$115 + x + 5 = 180$$

Lesson 3.2 Parallel Lines and Transversals

Solve for x.



Check Answer

$$136 + 7\left(-\frac{52}{7}\right) + 96 \stackrel{?}{=} 180$$

on calculator

$$180 = 180$$



Supplementary.
They form a straight
Angle.

$$136 + 7x + 96 = 180$$

$$\begin{array}{r} 232 + 7x = 180 \\ -232 \quad -232 \end{array}$$

$$\frac{7x}{7} = \frac{-52}{7}$$

$$x = -\frac{52}{7}$$

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Homework:

Pg 123

4-9, 11, 12

I expect to see justification on 4-6, and 11 & 12. Failure to provide justification will result in reduced credit.