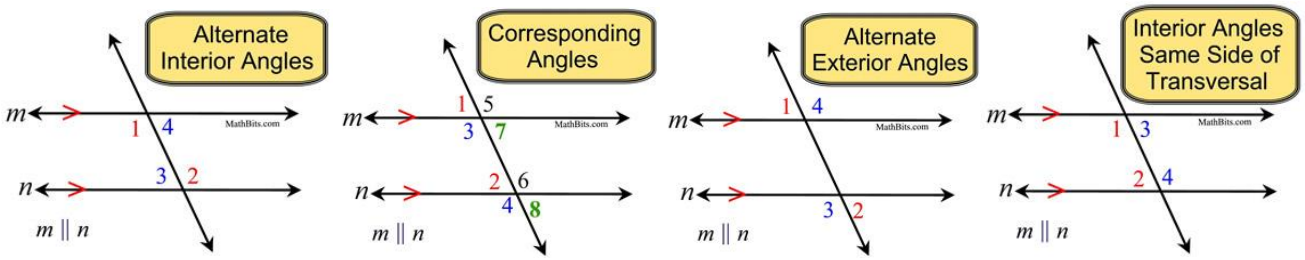
Name: _____ Date: _____

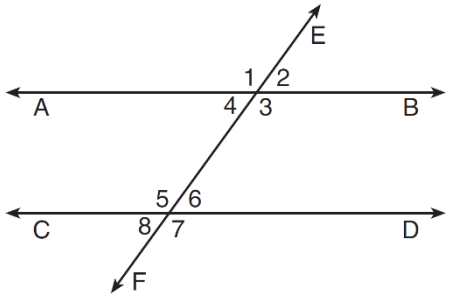
UNIT 1B **LESSON 15**

AIM: WHAT IS THE RELATIONSHIP BETWEEN TRANSVERSALS AND PARALLEL LINES? (DAY 2)



Do Now:

1. Transversal $\overleftrightarrow{EF}$ intersects $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$, as shown in the diagram below.



Which statement could always be used to prove $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$?

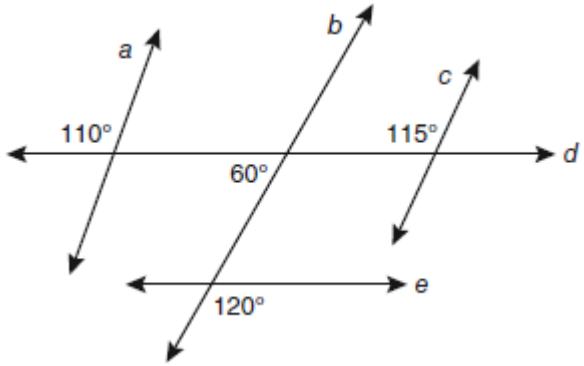
1) $\angle 2 \cong \angle 4$

2) $\angle 7 \cong \angle 8$

3) $\angle 3$ and $\angle 6$ are supplementary

4) $\angle 1$ and $\angle 5$ are supplementary

2. Based on the diagram below, which statement is true?



1) $a \parallel b$

2) $a \parallel c$

3) $b \parallel c$

4) $d \parallel e$

EXTRA PRACTICE:

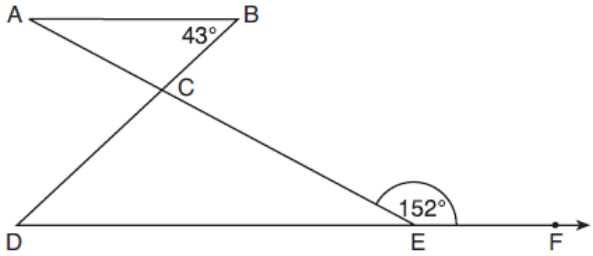
1. In the diagram below, $\overline{AB} \parallel \overrightarrow{DEF}$, $\overline{AE}$ and $\overline{BD}$ intersect at C, $m\angle B = 43°$, and $m\angle CEF = 152°$. Which statement is true?

1) $m\angle D = 28°$

2) $m\angle A = 43°$

3) $m\angle ACD = 71°$

4) $m\angle BCE = 109°$



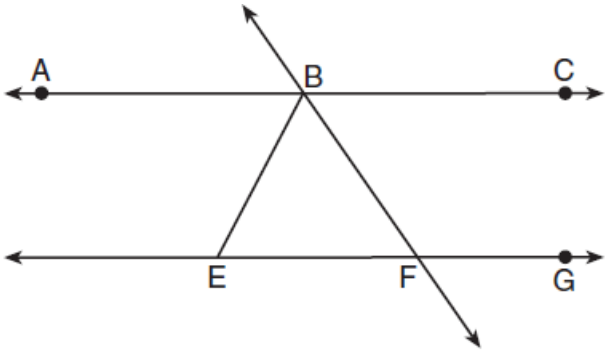
2. As shown in the diagram below, $\overleftrightarrow{ABC} \parallel \overleftrightarrow{EFG}$ and $\overline{BF} \cong \overline{EF}$.
If $m\angle CBF = 42.5°$, then $m\angle EBF$ is

1) 42.5°

2) 68.75°

3) 95°

4) 137.5°



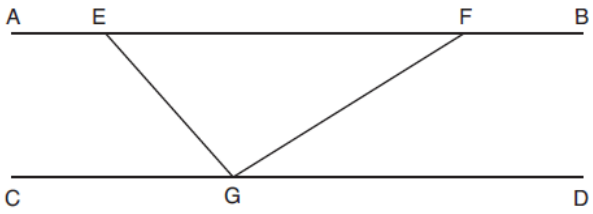
3. In the diagram below, $\overline{AEFB} \parallel \overline{CGD}$, and $\overline{GE}$ and $\overline{GF}$ are drawn.
If $m\angle EFG = 32°$ and $m\angle AEG = 137°$, what is $m\angle EGF$?

1) 11º

2) 43º

3) 75º

4) 105º



4. In the diagram below, $\overline{EF}$ intersects $\overline{AB}$ and $\overline{CD}$ at *G* and *H*, respectively, and $\overline{GI}$ is drawn such that $\overline{GH} \cong \overline{IH}$.
If $m\angle EGB = 50°$ and $m\angle DIG = 115°$, explain why $\overline{AB} \parallel \overline{CD}$.