Geometry #11: Angles Formed by Parallel Lines

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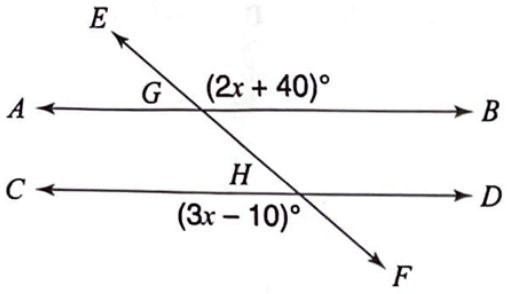
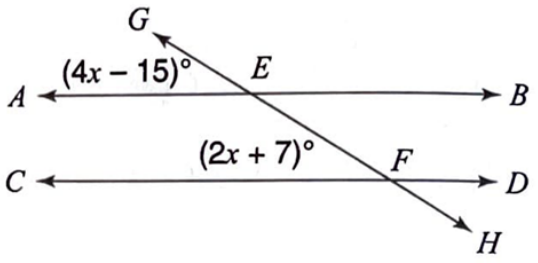


Exercise 6

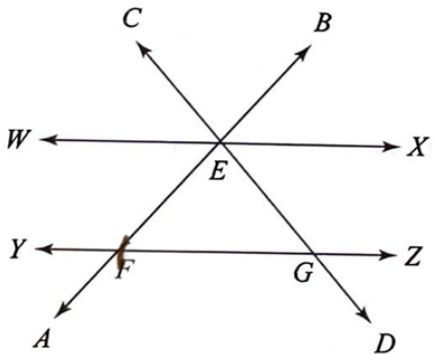


Exercise 7

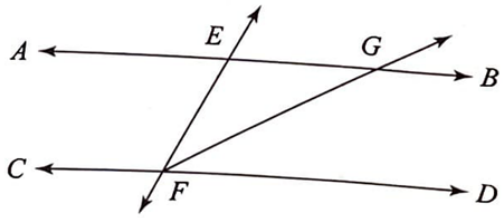
6. In the accompanying diagram, transversal $\overleftrightarrow{EF}$ intersects parallel lines $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ at G and H, respectively. If $m\angle EGB = 2x + 40$ and $m\angle FHC = 3x - 10$, what is the measure of $\angle DHE$?

7. In the accompanying diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$, $m\angle AEG = 4x - 15$, and $m\angle CFE = 2x + 7$. What is the measure of $\angle BEF$?

8. In the accompanying diagram, $\overleftrightarrow{WX} \parallel \overleftrightarrow{YZ}$; $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$ intersect $\overleftrightarrow{WX}$ at E and $\overleftrightarrow{YZ}$ at F and G, respectively. If $m\angle CEW = m\angle BEX = 50$, find $m\angle EGF$.



Exercise 8



Exercise 9

9. In the accompanying diagram, $\overleftrightarrow{AB} \parallel \overleftrightarrow{CD}$ and $\overleftrightarrow{FG}$ bisects $\angle EFD$. If $m\angle EFG = x$ and $m\angle FEG = 4x$, find $m\angle EGF$.