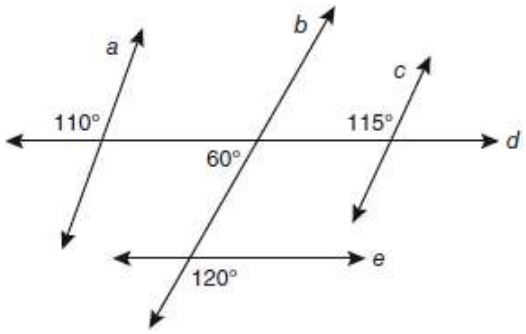
Name _____ Date _____
Mr. Schlansky Geometry

Triangles/Parallel Lines Review Sheet

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

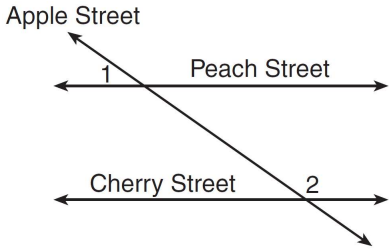


1) $a \parallel b$
2) $a \parallel c$
3) $b \parallel c$
4) $d \parallel e$

2. In $\triangle ABC$, $m\angle A = 3x + 1$, $m\angle B = 4x - 17$, and $m\angle C = 5x - 20$. Which type of triangle is $\triangle ABC$?

1) right
2) scalene
3) isosceles
4) equilateral

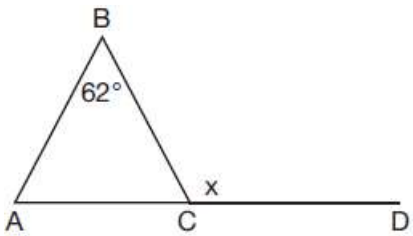
3. Peach Street and Cherry Street are parallel. Apple Street intersects them, as shown in the diagram below.



If $m\angle 1 = 2x + 36$ and $m\angle 2 = 7x - 9$, what is $m\angle 1$?

1) 9
2) 17
3) 54
4) 70

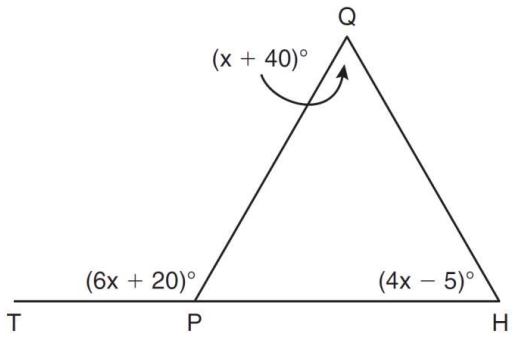
4. Given $\triangle ABC$ with $m\angle B = 62°$ and side $\overline{AC}$ extended to D, as shown below.



Which value of x makes $\overline{AB} \cong \overline{CB}$?

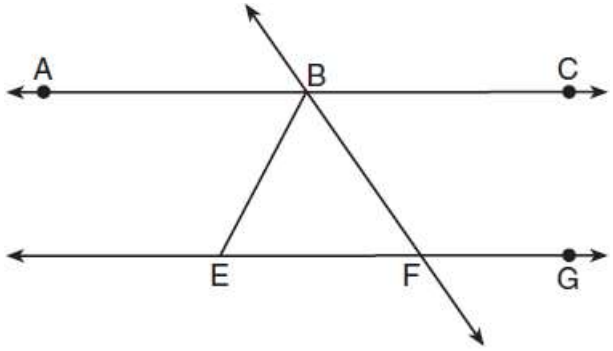
1) 59°
2) 62°
3) 118°
4) 121°

5. In the diagram below of $\triangle HQP$, side $\overline{HP}$ is extended through P to T, $m\angle QPT = 6x+20$, $m\angle HQP = x+40$, and $m\angle PHQ = 4x-5$. Find $m\angle QPT$.



(Not drawn to scale)

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



7. In the diagram below of $\triangle GJK$, H is a point on $\overline{GJ}$, $\overline{HJ} \cong \overline{JK}$, $m\angle G = 28$, and $m\angle GJK = 70$.
Determine whether $\triangle GHK$ is an isosceles triangle and justify your answer.