

Segment/Angle Addition, Perp. Bisector Eq's

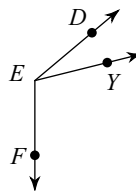
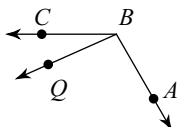
For No. 1-4, Point B is between A and C. Find the length indicated.

- 1) $AC = 2x - 14$, $AB = x - 4$, and $BC = 1$. Find AB .
 2) $AC = 16$, $AB = x + 6$, and $BC = x$. Find BC .

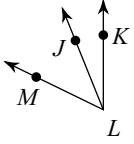
- 3) Find BC if $AB = 10$, $AC = 2x - 1$, and $BC = x - 3$.
 4) Find AB if $BC = 2x - 16$, $AC = 10$, and $AB = -10 + x$.

- 5) Find BC if $BC = 2x + 14$, $AB = 15 + x$, and $AC = 14$.
 6) Find AB if $BC = 9$, $AC = x + 15$, and $AB = 2x + 11$.

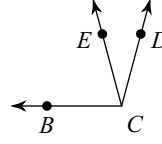
- 7) $m\angle ABC = 120^\circ$, $m\angle ABQ = -6 + 17x$, and $m\angle QBC = 3x + 6$. Find $m\angle QBC$.
 8) $m\angle YEF = x + 109$, $m\angle DEY = x + 31$, and $m\angle DEF = 130^\circ$. Find $m\angle DEY$.



- 9) Find $m\angle JLK$ if $m\angle JLK = 5x + 2$,
 $m\angle MLK = 15x + 4$, and $m\angle MLJ = 42^\circ$.



- 10) $m\angle ECD = 30^\circ$, $m\angle BCE = 25x$,
and $m\angle BCD = 35x$. Find $m\angle BCE$.



Write the slope-intercept equation of the perpendicular bisector of the segment with the given endpoints.

11) E(-4, -7) F(0,1)

12) M(-3,-1) N(-7,5)