Name _____ Date _____

Segment Bisectors and Congruence

1. Line RS bisects $\overline{PQ}$ at point R. Find RQ if $PQ = 14$ centimeters.

2. Line JK bisects $\overline{MN}$ at point J. Find MN if $JM = 6\frac{3}{4}$ feet.

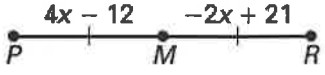
3. Point T bisects $\overline{UV}$. Find UV if $UT = 4\frac{1}{2}$ yards.

4. Point C bisects $\overline{AB}$. Find CB if $AB = 14.8$ meters.

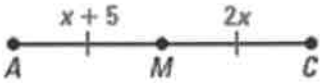
5. Find LN.

6. Find AM.

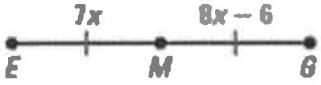
7. Find MR.



11. Find AM.



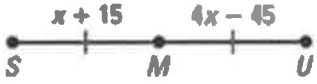
12. Find EM.



13. Find JM.

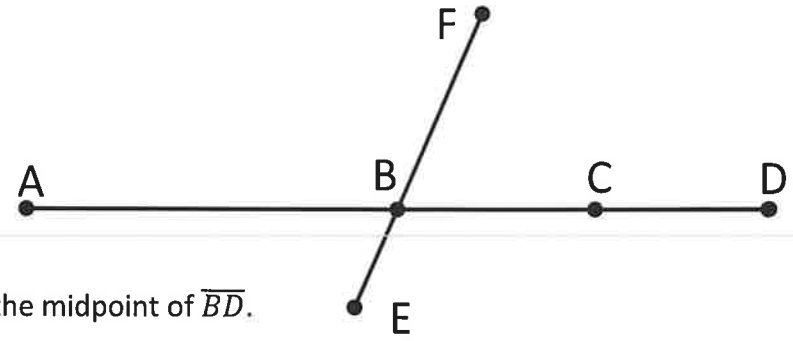
14. Find PR.

15. Find SU.



16. Find XZ.

Challenge Questions.



$\overline{EF}$ bisects $\overline{AD}$ at B. C is the midpoint of $\overline{BD}$.
CD = 3x+2
BC = y+2
AB = 12x-2
EB = y
BF = 4y+1

Find AC and EF.

★ **EXTENDED RESPONSE** As shown, a path goes around a triangular park.

a. Find the distance around the park to the nearest yard.

b. A new path and a bridge are constructed from point Q to the midpoint M of $\overline{PR}$. Find QM to the nearest yard.

c. A man jogs from P to Q to M to R to Q and back to P at an average speed of 150 yards per minute. About how many minutes does it take? *Explain.*