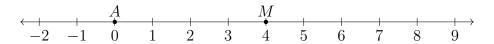
Unit 1: Segments, length, and area

15 Sept 2022

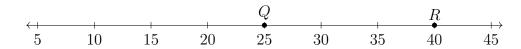
## 1.5 Extension: Find an endpoint given the midpoint

1. Given M is the midpoint of  $\overline{AB}$ , with A=0 and M=4. Find the value of point B and mark and label it on the number line.

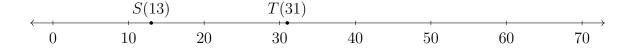
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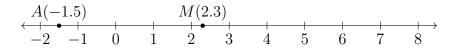
2. Given collinear points with Q the bisector of  $\overline{PR}$ , Q(25) and R(40). Find P, marking it and labeling it on the number line.



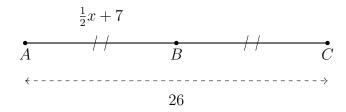
3. Given points S(13) and T(31), find the value of U such that T is the midpoint of  $\overline{SU}$ . Mark U and label it on the number line.



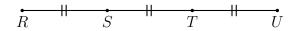
4. The point M(2.3) is the midpoint of segment  $\overline{AB}$ . Given A(-1.5), find the value of B. Mark and label it below.



5. Point B bisects segment  $\overline{AC}$ ,  $AB = \frac{1}{2}x + 7$  and AC = 26. Find x.



6. Given the points S and T trisect the line segment  $\overline{RU}$ , as shown below. If RT=7, find RU.



- 7. The point Q lies on  $\overline{AB}$  three quarters of the way from A to B. Given AB=28.
  - (a) Mark and label the location of Q. (measure)
  - (b) Find AQ. State an equation for full credit.

