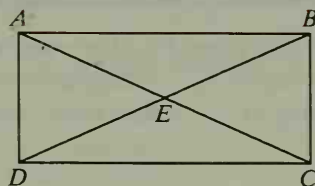**What can you deduce from the given information?**

17. Given: $AE = DE$;
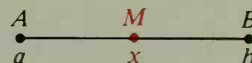 $CE = BE$

18. Given: $\overline{AC}$ bisects $\overline{DB}$;
    $\overline{DB}$ bisects $\overline{AC}$;
    $CE = BE$

19. Copy and complete the following proof of the statement: If points A and B have coordinates a and b, with $b > a$, and the midpoint M of $\overline{AB}$ has coordinate x, then $x = \dfrac{a + b}{2}$.

    Given: Points A and B have coordinates a and b; $b > a$; midpoint M of $\overline{AB}$ has coordinate x.

    Prove: $x = \dfrac{a + b}{2}$

Proof:

Statements	Reasons
1. A, M, and B have coordinates a, x, and b respectively; $b > a$	1. __?__
2. $AM = x - a$; $MB = b - x$	2. __?__
3. M is the midpoint of $\overline{AB}$.	3. __?__
4. $\overline{AM} \cong \overline{MB}$, or $AM = MB$	4. __?__
5. $x - a = b - x$	5. __?__
6. $2x = $ __?__	6. __?__
7. $x = \dfrac{a + b}{2}$	7. __?__

C 20. Fold down a corner of a rectangular sheet of paper. Then fold the next corner so that the edges touch as in the figure. Measure the angle formed by the fold lines. Repeat with another sheet of paper, folding the corner at a different angle. Explain why the angles formed are congruent.

21. M is the midpoint of $\overline{AB}$. Q is the midpoint of $\overline{AM}$, and T is the midpoint of $\overline{QM}$. If the coordinates of A and B are a and b, find the coordinates of Q and T in terms of a and b.

22. Point T is the midpoint of $\overline{RS}$, W is the midpoint of $\overline{RT}$, and Z is the midpoint of $\overline{WS}$. If the length of $\overline{TZ}$ is x, find the following lengths in terms of x. (*Hint:* Sketch a diagram and let $y = WT$.)
    a. RW b. ZS c. RS d. WZ