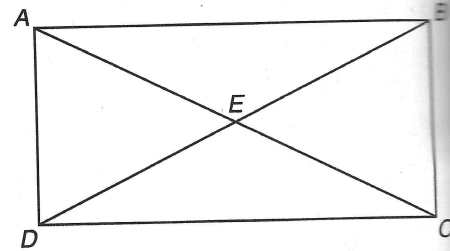


Practice

Rectangles

Use rectangle $ABCD$ and the given information to solve each problem.

- If $AC = 4x - 60$ and $BD = 30 - x$, find BD . **12**
- If $AC = 4x - 60$ and $AE = x + 5$, find EC . **40**
- If $m\angle BAC = 4x + 5$ and $m\angle CAD = 5x - 14$, find $m\angle CAD$. **41**
- If $AE = 2x + 3$ and $BE = 12 - x$, find BD . **18**
- If $m\angle BAC = 3x + 5$ and $m\angle ACD = 40 - 2x$. Find $m\angle AED$. **52**



Determine whether $PQRS$ is a rectangle. Justify your answer.

- $P(2, 3)$, $Q(5, 9)$, $R(11, 6)$, $S(8, 0)$ **yes; opposite sides parallel and all right angles**
- $P(-1, 4)$, $Q(3, 6)$, $R(9, -3)$, $S(5, -5)$ **no; not all right angles**
- $P(1, 3)$, $Q(4, 7)$, $R(6, 2)$, $S(2, 4)$ **no; opposite sides not parallel**
- $P(-1, -3)$, $Q(-4, 6)$, $R(8, 10)$, $S(11, 1)$ **yes; opposite sides parallel and all right angles**
- $P(-1, -2)$, $Q(5, 2)$, $R(13, -10)$, $S(7, -14)$ **yes; opposite sides parallel and all right angles**