

Construct Line Segments

Use only a compass and straightedge. Keep every construction arc visible and label the requested result.

Compass and straightedge workspace

1.

Construct and label midpoint M of segment ST.



WORKSPACE

2.

Construct the perpendicular bisector of segment ST.



WORKSPACE

3.

Construct a line through U parallel to line ST.



WORKSPACE

4.

Construct and label midpoint M of segment JK.



WORKSPACE

Construct Line Segments

Construction Answer Key

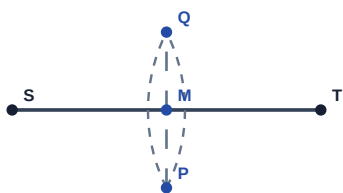
Use only a compass and straightedge. Keep every construction arc visible and label the requested result.

Solutions and compass marks

1.

Construct and label midpoint M of segment ST.

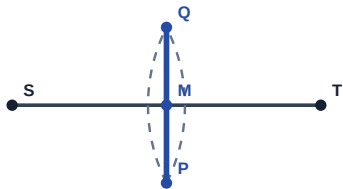
1. Open the compass to more than half the segment length.
2. From S and T, draw equal-radius arcs above and below the segment.
3. Label the arc intersections P and Q; draw line PQ.
4. Its intersection with ST is midpoint M.



2.

Construct the perpendicular bisector of segment ST.

1. Open the compass to more than half the segment length.
2. From S and T, draw equal-radius arcs above and below the segment.
3. Label the arc intersections P and Q; draw line PQ.
4. Line PQ is the perpendicular bisector.



Construct Line Segments

Construction Answer Key

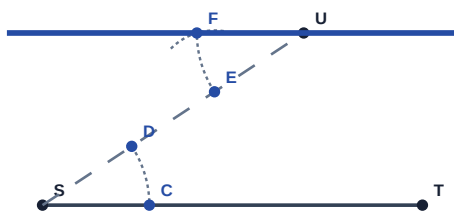
Use only a compass and straightedge. Keep every construction arc visible and label the requested result.

Solutions and compass marks

3.

Construct a line through U parallel to line ST.

1. Draw transversal SU.
2. From S, draw an arc meeting ST at C and SU at D.
3. With the same radius, draw an arc centered at U meeting US at E.
4. Set the compass to CD; from E mark F on the arc centered at U.
5. Draw line UF. Equal alternate angles make it parallel to ST.



4.

Construct and label midpoint M of segment JK.

1. Open the compass to more than half the segment length.
2. From J and K, draw equal-radius arcs above and below the segment.
3. Label the arc intersections P and Q; draw line PQ.
4. Its intersection with JK is midpoint M.

