Basic Geometric Constructions with the Triman® Safety Compass

TriMan

Easy to use!

This 4-in-1 tool lets you:
- Draw circles, straight lines
- Construct, copy & read angles
- Measure/convert inches & centimeters
- Create simple to complex geometric & artistic designs

Degree Markings in 15° increments

Swivel Disc "POINT" safely marks center of circle

Cursor, 2 pencil/pen placements

Straightedges, direct comparison of INCHES & CENTIMETERS

Safe, Sturdy, Accurate

Pinch and slide cursor into position
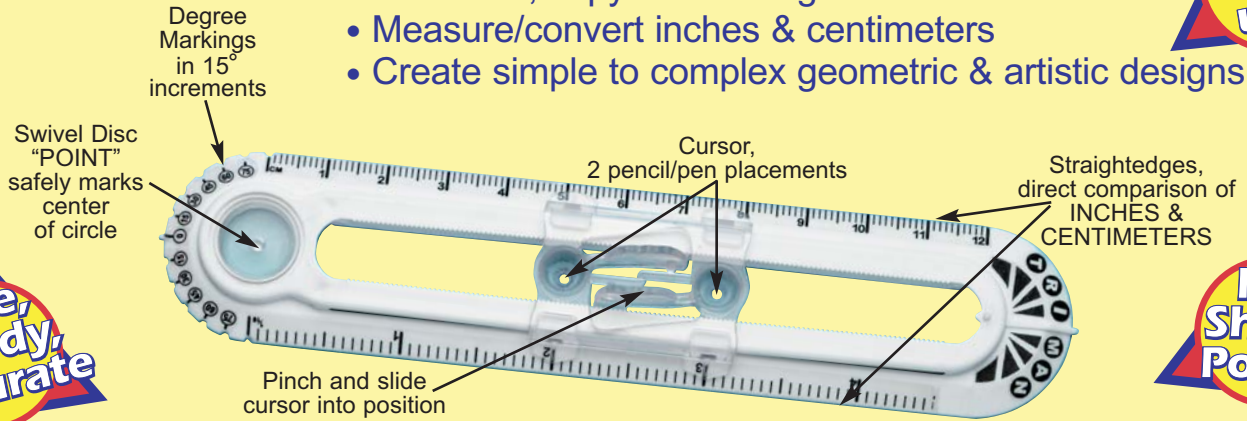
No Sharp Points
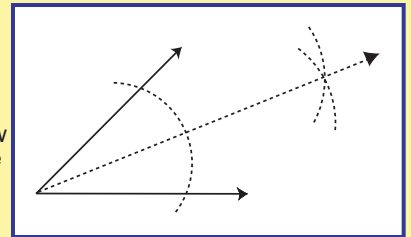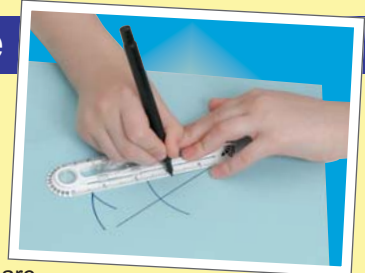
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A. Draw Cricles

1. Pinch and slide cursor to the desired radius measurement, 1/2 of the circle's diameter to be drawn.
2. Place an index finger on the transparent swivel disc.
3. Place pencil or pen in a cursor hole.
4. Draw a perfect circle from 1" (2.5 cm) to 9" (23 cm) in diameter.

B. Bisect a Line Segment

1. Draw a horizontal line with the straightedge.
2. Slide the cursor point a little over 1/2 of the total length of the line drawn.
3. Place the swivel disc (compass point) at one end of the line, strike an arc. Make sure that the compass point and 0° line up with the edge of the line drawn.
4. Move the compass to the opposite end of the line, strike an arc. Again, check compass point and 0° markings.
5. Draw a vertical line with the straightedge through the intersections of the two arcs.

A   B

C. Construct an Angle

1. Draw a horizontal line with the straightedge.
2. Decide on the size of the angle to be constructed.
3. Locate the degree markings on the compass to the left of swivel disc (point).
4. Place compass point on the baseline make sure 0° lines up with baseline. Make a small mark to indicate size of the angle to be drawn using the degree markings.
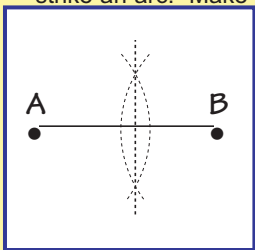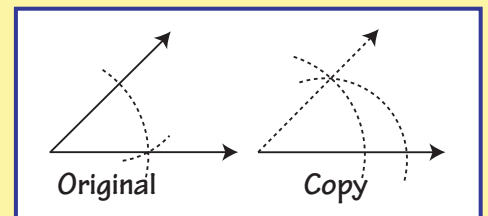5. Using the straightedge, draw the angle ray.

45°

D. Bisect an Angle

1. Construct an angle following the instructions in "C".
2. Place compass point at the intersection or vertex of the baseline and angle ray. Strike an arc.
3. Place the compass point at the vertex of the angle ray and the arc. Strike a second arc.
4. Place the compass point at the vertex of the baseline and the first arc. Strike a third arc.
5. Using the straightedge draw a line from the vertex of the baseline and the angle ray through the intersection of the two arcs.

E. Copy an Angle

1. Construct an angle to be copied. Follow instructions in "C".
2. Draw a second baseline below the first baseline.
3. Return to the original angle and strike an arc, place compass point at the vertex of the baseline and angle ray.
4. Return to the second baseline strike an arc.
5. Return to the angle and measure the distance between the two rays by placing the compass point where the angle ray and the arc intersect. Pinch and slide cursor to where the baseline and the arc intersect. Strike a small arc.
6. Return to the second baseline. Place the compass point where the baseline and the arc intersect. Strike an arc.
7. Using the straightedge draw the angle ray starting at the baseline and through the intersection of the two arcs.
8. Measure the angle to prove.

Original   Copy