POINT COUNTERS
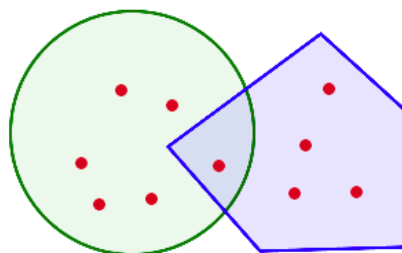
Cabri allows you to count the number of points located inside a circle or a polygon. The Cabri Author file *pointcounters* contains the example that follows.

In the circle: 6 point(s)

In the polygon: 5 point(s)

The number of points within the circle and within the polygon have been counted.

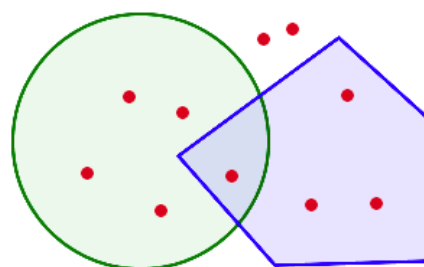Why do the counts add up to 11 when there are only 10 points?
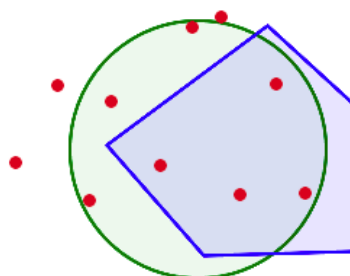
In the circle: 5 point(s)

In the polygon: 4 point(s)

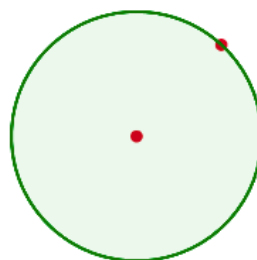Two points have been moved: the counts are updated instantly.

In the circle: 7 point(s)
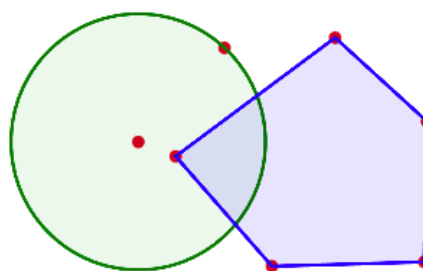
In the polygon: 4 point(s)

Here, the circle has been moved, and again the counts are updated.

1. SETTING UP THE CIRCLE, POLYGON, AND POINTS

Use the **Circle** tool 🔵 to create a circle, clicking to select or create first the point at the center and then a point defining the circle radius.
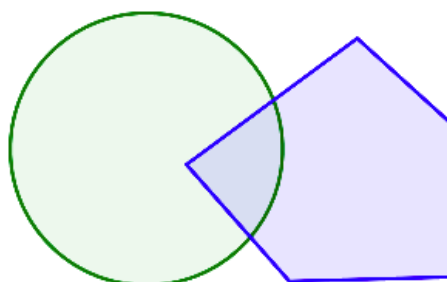
Use the **Polygon** tool 🔷 to create a polygon, clicking to select or create the polygon vertices and clicking on the first or last vertex to end.
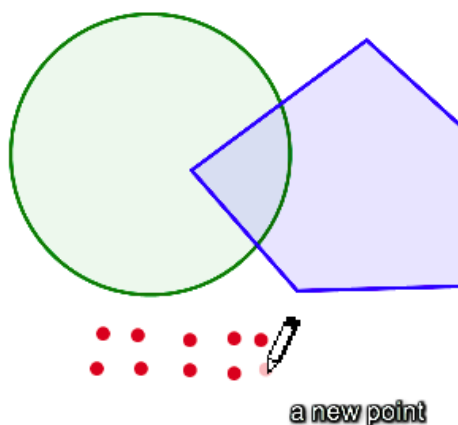
You may also use the **Triangle**, **Quadrilateral**, or any of the regular polygon tools to create polygons for which point counters may be set up.

Now, to avoid confusion, hide the points defining the circle and the polygon using the **Hide/Show** tool 🌤.
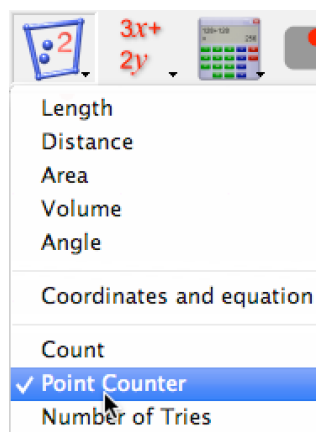
Now create all the points to count (say ten) using the **Point** tool ⚬.

a new point

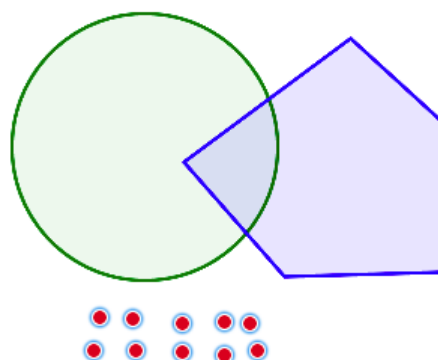# 1. SETTING UP THE CIRCLE, POLYGON, AND POINTS

2. CREATING A POINT COUNTER
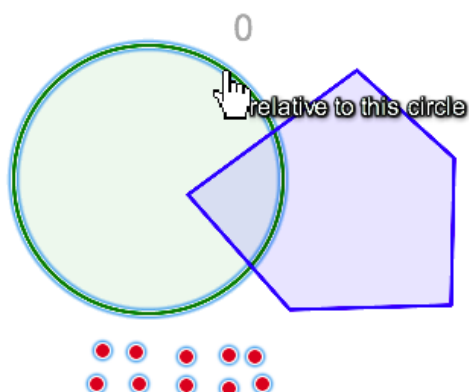
Select the **Point Counter** tool.

Click on each of the ten points created above, or select the points with a selection rectangle.
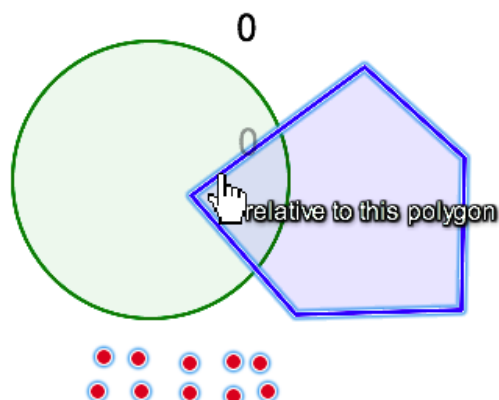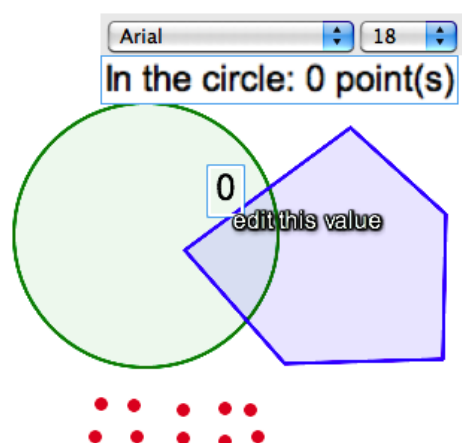
Click on the circle to end the construction.

The number that appears gives the number of these points which are located inside the circle.

Repeat this for the points and the polygon.

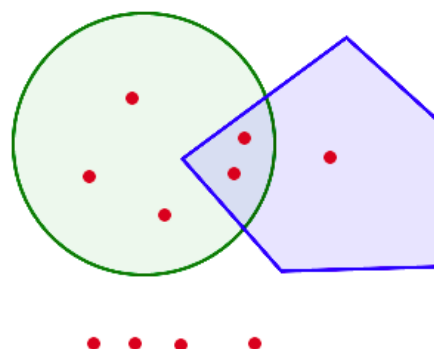Now use the **Text** tool to add text to the two values.

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In the circle: 0 point(s)

0
edit this value

The point counter is initially attached to the object, as shown by the grey segment, and will move with the object.

In the polygon: 0 point(s)

It may be pulled away, however.

In the circle: 5 point(s)

In the polygon: 3 point(s)

Drag some of the points into the circle or polygon to see the count change.

Note: it is not possible to edit a point counter. If you want to add more points to the count, create a separate counter for these points relative to the object and then add the two counters. A similar process will subtract points from a count.

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