A Circle Property

I'm going to pick a number, let's say... 12.

Pick four numbers, any numbers, let's call them p, q, s, and t, where:

- p and q multiply to 12, and
- s and t multiply to -12.

Now create the points (p, s) and (q, t).

Record your values in a table to avoid confusion.

p	q	product	s	t	product
		12			-12

(p , s)   (q , t)

A   B

Now on axes, plot the points A and B.

Using compasses, draw the circle that has AB as diameter.

What is the equation of your circle?

Do you notice anything unusual about your circle?

Compare your circle with those your colleagues have drawn.
What do they all have in common?