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Squeak: Trigonometry project: What determine the size of the circle?

Inquiry of the script: Forward by A; Turn by B;

When we trace (with a 'pen down' feature) the movement of an object while following the script "Forward by 5; Turn by 5;" we get a circle. When we change the script into: "Forward by 10; Turn by 5;" we get another circle. If we continue to change both A and B we might get more than one closed shape. Then we can speak about the inscribed circle with radius r and the circumscribed circle with radius R .

Experiment with different values of A and B, as you look for answers to the following questions:

1. Is it correct to say: The bigger the measure of "forward", the bigger the radius R of the circle?
2. Is it correct to say: The bigger the measure of the angle of the turn, the bigger the circle?
3. Is the opposite of the statement 2 correct?
4. Use trigonometry to find the expressions to compute the radius r , and the radius R from the measure (A) of the forward and the measure of angle (B) of the turn.

