

Pi: What comes next? Solutions

puzzle #1

Measure the height of a drinking glass and measure the circumference of the glass.

Can you find a glass with height measurement a bigger number than its circumference measurement?

ANSWER TO PUZZLE 1:

I bet you didn't find one! You need an exceptionally skinny tall glass which would be a lousy glass for drinking water!

puzzle #2

The value of pi for a circle is the tricky number 3.141592....

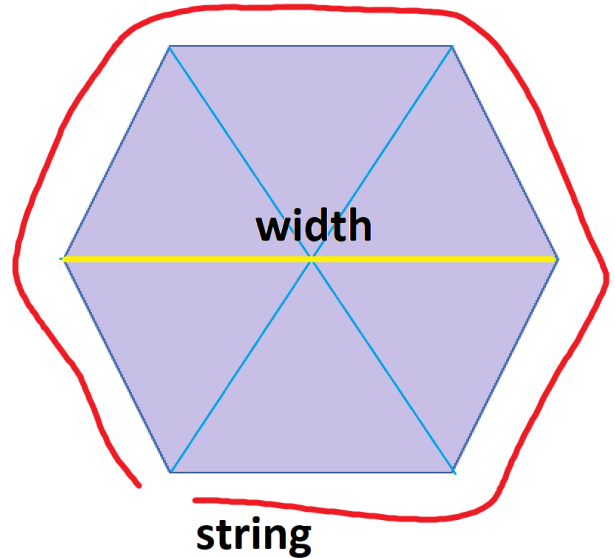
The value of pi for a square is 4.

Is there a value of pi for a regular hexagon?

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The NMF Weekly is written by mathematician Dr. James Tanton as a resource for friends and fans of the 2021 National Math Festival.

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ANSWER TO PUZZLE 2:

A regular hexagon is composed of 6 equilateral triangles. If you measure the "width" of the hexagon as its widest possible value, then you can see that the perimeter of the hexagon is exactly 3 times its width. Thus, in this setting, the value of pi for a regular hexagon is 3.

But ... we didn't measure the widest width of a square when we said that a square has pi-value 4. We used its shortest width. Hmmm.

So what is the value of pi for a regular hexagon if we use its shortest width instead?