**Finding the Formula for Circumference**

Go to https://www.interactive-maths.com/circumference-of-a-circle-ggb.html.

Using the tool, create circles of various diameters and circumferences to fill in the table. If you can’t get the diameter to match the table value exactly, don’t worry! Just get it as close as possible and record the value you used instead.

By changing the diameter you should see the circumference change. Can you find a relationship between circumference and diameter?

The last two rows are left blank for diameters of your choice

|  |  |  |
| --- | --- | --- |
| Diameter | Circumference | Ratio |
| 1 |  |  |
| 2.48 |  |  |
| 3.72 |  |  |
| 4.1 |  |  |
|  |  |  |
|  |  |  |

What was the formula for the circumference of the circle? Write your formula out using **C** to represent circumference and **d** to represent diameter.

What would this formula look like if we wanted to write it using radius instead of diameter? Write your formula out using **C** to represent circumference and **r** to represent radius.

**Finding the Formula for Circumference Solutions**

Go to <https://www.interactive-maths.com/circumference-of-a-circle-ggb.html>.

Using the tool, create circles of various diameters and circumferences to fill in the table. If you can’t get the diameter to match the table value exactly, don’t worry! Just get it as close as possible and record the value you used instead.

By changing the diameter, the circumference changes. What’s the relationship between circumference & diameter?

The last two rows are left blank for diameters of your choice

|  |  |  |
| --- | --- | --- |
| Diameter | Circumference | Ratio |
| 1 | **3.142** | **3.142** |
| 2.48 | **7.79** | **3.14** |
| 3.72 | **11.687** | **3.14** |
| 4.1 | **12.879** | **3.142** |
|  |  |  |
|  |  |  |

What’s the formula for the circumference of the circle? Write your formula out using **C** to represent circumference & **d** to represent diameter.

**Since pi = C/d, C = d x pi**

What would this formula look like if we wanted to write it using radius instead of diameter? Write your formula out using **C** to represent circumference and **r** to represent radius.

**C= 2 x pi x r**