

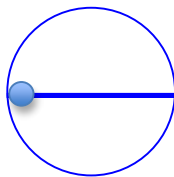
Discovering Pi (π)

Activity: (circle hand-outs, candies, calculators)

- Put students in groups (2-4 students per group).
- Talk about the definition of circumference and how it relates to perimeter.
- Talk about the definition of diameter.
- Have students explain back the definition of both circumference and diameter.
- Hand out the circles. Have students outline with a finger circumference and diameter
- Review the concept of Ratio. Discuss what the ratio of 30 to 3 would look like.
- Read the tasks on the circle handouts.
- Explain the importance of lying the candies down to measure. When measuring the circumference, students need to line up candies in the middle of the candy (see diagram). The candies cannot be so close that they overlap each other, but close enough that they are no gaps. You will need to walk around and check as they work.



When measuring the diameter, students need to line up candies in the middle and keep them inside the circle (see diagram).



- Explain that you are going to hand out the candies and they are not to be eaten until everyone is finished finding their ratio.
- Hand out the hard candies (M&Ms, Skittles, Smarties, any round candy that is mostly uniform)
- Have Fun!!!!
- Put all ratios on board and see that they are all very close (or at least should be) to 3.14.... Questions you could ask the class
 - What do you notice about all the ratios? (Most common answer is that they are all 3.---)
 - Are there any that are really close? (Usually there are some that are 3.17, 3.15, 3.14...)
 - Did you all have the same size circle? (No)
 - Did you all have the same type candy? (Obviously, ask this only if using other candy)
 - What do you think this all means?
- Closing: Explain that for any circle the ratio of it's circumference to it's diameter is a constant number that is called pi (π) and $\pi = 3.1415926...$ $\frac{C}{d} = \pi$
- Extension: At this point or the next day you can show how to derive the circumference formula by doing some simple solving to show that $C = \pi d$.

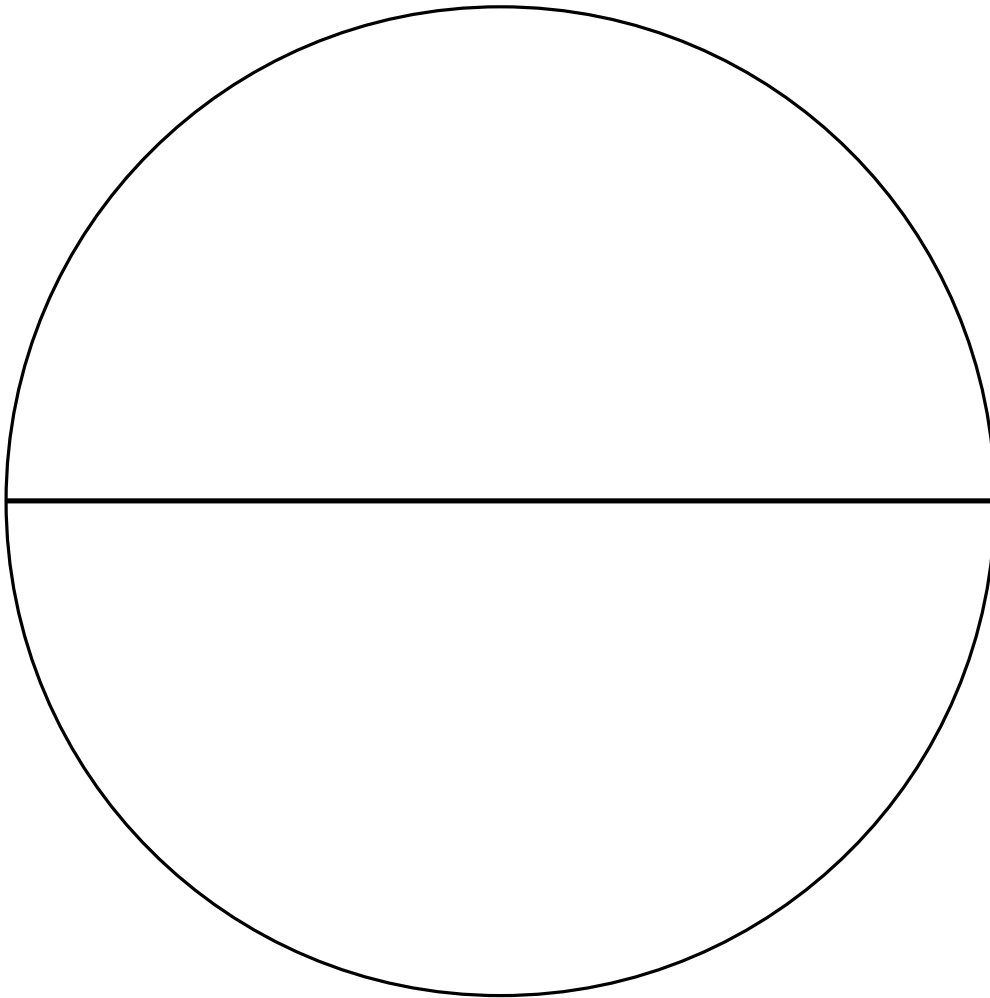
M & M's and Circumference

Number of M & M's on the circle's circumference is_____

Number of M & M's on the circle's diameter is_____

The ratio of circumference to diameter in fraction form is_____

The ratio of circumference to diameter in decimal form is_____



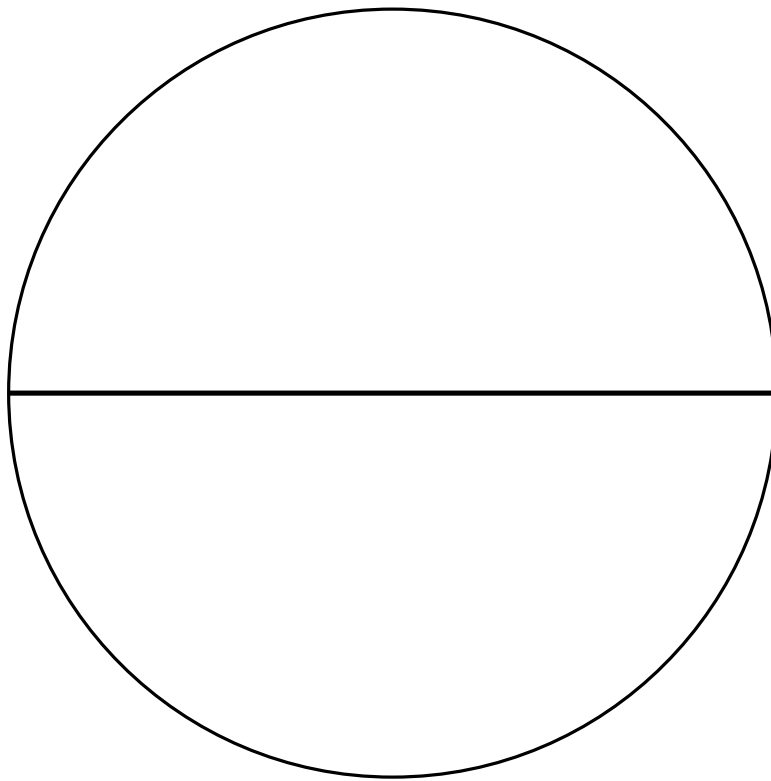
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