

Forum:[Hack Forums](#)

Thread: [5 Math Problems \(Geometry\)](#)

Sharjah - February 6, 2017, 2:38 pm

- 1) Determine the area and circumference of a circle with radius 8 cm.
Use π key on your calculator so the answer is as accurate as possible.
Round your answer to the nearest hundredth as needed.
- 2) Determine the perimeter and area of the shape shown below.
<https://i.imgur.com/GW2zn3f.png>
- 3) Determine the perimeter and area of the shape shown below. (Both rounded regions are semicircles.)
<https://i.imgur.com/fFAFzMY.png>
- 4) Find the volume of a cylinder with radius of 3 inches and height 7 inches.
- 5) Find the volume of a sphere with radius 8 meters is

GroveStreetOG - February 6, 2017, 2:43 pm

- 1)
Area of a circle is πr^2
circumference of a circle is $2\pi r$
- 2)
You can split that up to 2 shapes, a right triangle and a rectangle
- 3)
EDITED, I AM VERY UNSURE ABOUT THIS PART OF THE QUESTION.
Spoiler ([Click to View](#)) Perimeter of a circle is its circumference, So there are 2 semi circles that are about the exact same size, so since we're looking at half the circle only, Circumference of a semi circle = πr , but since there are 2 of them, its $2\pi r$.
Add that onto the perimeter of a square which is just $2L$.
For area, same concept, area of 1 semi circle is $\frac{\pi r^2}{2}$, then for 2 semi circles its a whole circle which is just πr^2 . So area of that whole shape is $\pi r^2 + l*w$ ($l*w$ is the area of a square/rectangle)
- 4)
Volume of a cylinder:
 $V = \pi r^2 h$
 $= \pi (3^2) (2*7)$
- 5)
Volume of a sphere:
 $V = \frac{4}{3} \pi r^3$
 $= \frac{4}{3} \pi (8^3)$

I dont have a calculation handy so just enter the numbers =P

THC - February 6, 2017, 2:46 pm

(Feb 6, 2017 03:43 PM)GroveStreetOG Wrote: [\[CITE\]](#) snippy
Dang it. Looks right. Was looking forward to a bit of a challenge :P

mattdax - February 7, 2017, 7:08 am

What math is this? If i recall correctly I did all this stuff in my grade 8 exam. Used to love geometry such easy stuff.

Elkabbeer - February 7, 2017, 11:22 am

(Feb 6, 2017 03:43 PM)GroveStreetOG Wrote: [\[CITE\]](#) 1)

Area of a circle is πr^2

circumference of a circle is $2\pi r$

2)

You can split that up to 2 shapes, a right triangle and a rectangle

3)

EDITED, I AM VERY UNSURE ABOUT THIS PART OF THE QUESTION.

Spoiler ([Click to View](#)) Perimeter of a circle is its circumference, So there are 2 semi circles that are about the exact same size, so since we're looking at half the circle only, Circumference of a semi circle = πr , but since there are 2 of them, its $2\pi r$.

Add that onto the perimeter of a square which is just $2L$.

For area, same concept, area of 1 semi circle is $\frac{\pi r^2}{2}$, then for 2 semi circles its a whole circle which is just πr^2 . So area of that whole shape is $\pi r^2 + l*w$ ($l*w$ is the area of a square/rectangle)

4)

Volume of a cylinder:

$$V = \pi r^2 h$$

$$= \pi (3^2) (2 \cdot 7)$$

5)

Volume of a sphere:

$$V = \frac{4}{3} \pi r^3$$

$$= \frac{4}{3} \pi (8^3)$$

I dont have a calculation handy so just enter the numbers =P