

ACT Math Practice for Pi Day

1.) If the circumference of a circle is 14π , what is its area?

- A. 7
- B. $7\pi^2$
- C. 14π
- D. 49π
- E. $49\pi^2$



2.) Euclid and Pythagoras go to a bistro, and each orders a slice of pie. Euclid orders a slice of chocolate pie for \$3.50, and Pythagoras orders a slice of strawberry rhubarb pie for x dollars. The mathematicians decide to leave a total tip of \$3.14 and to split the bill evenly. If the total amount that Euclid pays is \$5.70, what is the value of x ?

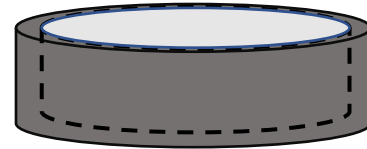
- A. \$4.76
- B. \$5.70
- C. \$6.28
- D. \$7.90
- E. \$11.40



3.) Which of the following functions has a period of 3π ?

- A. $f(x) = 3\pi\cos(5x) + 3$
- B. $f(x) = -\sin\left(\frac{2}{3}x + \pi\right) - 2$
- C. $f(x) = \cos(x - 3\pi) + 7$
- D. $f(x) = 2\sin\left(\frac{3}{2}x\right) - 3\pi$
- E. $f(x) = -5\sin\left(\frac{3\pi}{x}\right)$

4.) A pie plate shaped like a right cylinder has an exterior radius of 9 inches and an exterior height of 4 inches. If it is made of glass that has a uniform thickness of $\frac{1}{4}$ inch, which of the following options is closest to the maximum volume of pie filling that it can hold?



- A. 254 in^3
- B. 794 in^3
- C. 851 in^3
- D. 900 in^3
- E. 1017 in^3

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Answers:

1.) D

2.) A

3.) B

4.) D