

IT'S LIKE A TEST

School Year 2022/2023

Primary
Study Field: Mathematics

Test something something

By Kureji Ollie

Hololive ID Gen 2

Test something something

Subject : Mathematics
Event : They say Zeta pen streaming
Date : Sunday, 29 April 2023
Time : Until things are done

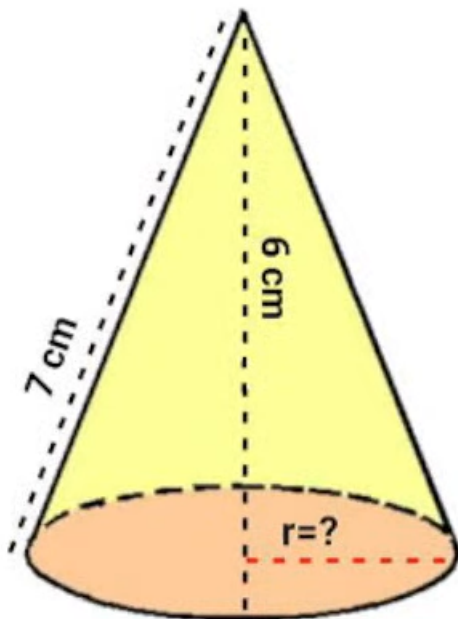
Instructions:

1. There are 10 essay questions.
 2. Do the questions that you find easy first.
 3. If you can't, wave at the camera while shouting "OLLIE-SENPAI BOING BOINGNYA TOP TOP MARKOTOP WANJAY"
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1. $(8x - 12)(6x + 7)$

The product of the above algebra is...
(Algebra, Grade 7)

2. One day, Kiko decided to ride a bike around the complex. During the ride, the wheel rotates 220 times, resulting in the total circumference of the wheel after going around the compound being 48400 cm. Find the area of Kiko's bicycle wheel so that Kiko can sleep tonight!
(2D Geometry, Grade 8)
3. Find r in the given shape (3D Geometry, Grade 9)



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4. If $\log_2 3 = x$, then the value of $\log_8 12$ is. . .
(Logarithm, Grade 10)
5. $f(x) = 4x^2 + 3x + 8$ [A]
 $g(x) = ax^2 + bx + c$ [B]
Function A has the same form as function B . Calculate $9a + 8b + 7c$.
(Quadratic Function, Grade 10)
6. In 2019, a steam wallet filling service is doing business.
The cheapest wallet filling is IDR 45 000, and he offers IDR 50 000 for each filling. Meanwhile, the most expensive wallet filling is IDR 900 000, and he offers IDR 905 000 for each filling.
The capital he prepared was IDR 5 500 000 for doing business. If x represents the number of fillings for the cheapest wallet and y represents the most expensive wallet filling, then the most appropriate target function for the fish trader to get the maximum profit is. . .
(Target Function, Grade 11)
7. Given an arithmetic sequence 2, 5, 8, . . . , $u_n = 144$. Determine the number of terms (n) !
(Arithmetic Sequence, Grade 11)
8. In a free gacha event, there is Box 1 containing 2 Oshi A stickers and 4 Oshi B stickers. Meanwhile, Box 2 contains 5 Oshi A stickers and 3 Oshi B stickers. 1 sticker is taken from each box. The probability of getting an Oshi A sticker from Box 1 and an Oshi B sticker from Box 2 is...
(Probability, Grade 12)
9. The 2^{nd} and 5^{th} terms of a geometric sequence are 1 and 8, respectively. Find the value of the 11^{th} term!
(Geometric Sequence, Grade 12)
10. Find the (first) derivative of the functions below:
- a) $f(x) = 8\sqrt{x}$
 - b) $f(x) = \frac{x}{2}$
 - c) $f(x) = x^2 + 4$
- (Derivative Function, Grade 12)