

CAT 2021 Questions

1. A 3-digit number, when reversed, increases by 198. How many such 3-digit numbers are possible?
2. ABCDEF is a regular hexagon of side 2. T is the midpoint of the side CD. Find the length of AT.
3. A circle of diameter 8 inches is inscribed in a right angled triangle ABC with angle B = 90. If BC = 10 inches, find the area of the triangle.

$$5 - \frac{1}{\log_{10} \sqrt{1-u^2}} + 4 \log_{10} \sqrt{1+u} = \log_{10} \sqrt{1-u}$$

Find 100u

- 4.
5. $|x^2 - 4x - 13| = r$. For what value of r does this equation have 3 distinct solutions.
6. 2 trains take 14 secs to cross each other. If train 1 is 160m long and takes 12 secs to cross a lamppost, and the speed of train 2 is 6kmph less than train 1, find the length of train 2.
7. Choose 3 or more numbers from 1 to 8 so that 3 and 5 are always taken and 7 and 8 are never taken together.