

Rapid Fire SAT Series.

- 1) Simplify the radical expression: $\frac{\sqrt[3]{1000}}{(\sqrt{5})^3}$
- 2) True or False? $\sqrt{2} - 1 = \frac{1}{\sqrt{2} + 1}$
- 3) $c + a = |c - a|$ can never be true
True/False?
- 4) If $f(x) = \frac{1}{x}$ & $g(y) = 1 + y$, what is the value of $g(f(4))$? And what is $f(g(4))$?
- 5) If $f(x) = 1 + 2x - (\sqrt{x})^2$ & $y = f(x)$, what is the slope of the line $y = f(x)$?
- 6) What is the smallest angle in the triangle whose sides are 2cm, 3cm & 7cm?

7) In the following diagram, the circle is inscribed inside the triangle.



There can be infinite number of triangles that can "engulf" the circle as shown, where three sides of the triangle touch the given circle.

True / False ?

Explain your answer

8) There is no solution to the equation

$$(x+1)(x-1) = x^2$$

True / False ?

9) $x^2 = x^4$ has

- a) no solution
- b) infinite solutions
- c) exactly one solution
- d) exactly two solutions
- e) exactly three solutions.

10) If $f(x) = \frac{1}{g(x)}$ and $g(y) = [f(y)]^2$
Find the value of $f(x)$ for $x = 2$