Thursday 09/28/2017

SAT

Question 1 $4x^2 - 9 = (px + t)(px - t)$ — Factor

In the equation above, p and t are constants.
Which of the following could be the value of p ?

A) 2
B) 3
C) 4
D) 9

$4x^2 - 9$ Special case $a^2 - b^2$

$(2x)^2 - 3^2$ $= (a-b)(a+b)$

$= (2x-3)(2x+3)$

Question 2

If $a^2 + b^2 = z$ and $ab = y$, which of the following is equivalent to $4z + 8y$?

A) $(a + 2b)^2$
B) $(2a + 2b)^2$
C) $(4a + 4b)^2$
D) $(4a + 8b)^2$

$4z + 8y$

$4(a^2+b^2)+8(ab)$

$= 4a^2 + 4b^2 + 8ab$

$= 4a^2 + 8ab + 4b^2$

$(2a)^2 + 2 \cdot 2a \cdot 2b + (2b)^2$

$(2a + 2b)^2$