February 17th

Write down three consecutive integers.

Find their sum and also find the sum of the squares of the integers.

Example:

$5 + 6 + 7 = 18$

$5^2 + 6^2 + 7^2 = 110$

Algebraically:

$(x - 1) + x + (x + 1) = 3x$

$(x - 1)^2 + x^2 + (x + 1)^2 = x^2 - 2x + 1 + x^2 + x^2 + 2x + 2 = 3x^2 + 2$

So the sum of the squares is 3 x the middle number squared plus 2