

$$a_1, a_2, a_3$$

$$a_3^2 = a_1^2 + a_2^2$$

$$(a_1 + 2d)^2 = a_1^2 + (a_1 + d)^2$$

$$a_1^2 + 4a_1d + 4d^2 = a_1^2 + a_1^2 + 2a_1d + d^2$$

$$2a_1d + 3d^2 = a_1^2$$

$$a_1^2 - 2a_1d - 3d^2 = 0$$

$$a_1^2 - 3a_1d + a_1d - 3d^2 = 0$$

$$a_1(a_1 - 3d) + d(a_1 - 3d) = 0$$

$$(a_1 + d)(a_1 - 3d) = 0$$

$$a_1 = -d$$

$$a_2 = 0$$

$$a_3 = d$$

$$a_1 = 3d$$

$$a_2 = 4d$$

$$a_3 = 5d$$

$$a_{10} = -d + d(9)$$

$$a_{10} = 8d$$

$$S_{10} = 5(-d + 8d)$$

$$S_{10} = 35d$$

$$a_{10} = 3d + d(9)$$

$$a_{10} = 12d$$

$$S_{10} = 5(15d) = 75d$$