

$$1142. a_{15} = ?$$

$$a_1 = 2$$

$$a_8 = 23$$

$$a_8 = a_1 + 7d$$

$$23 = 2 + 7d$$

$$7d = 21$$

$$d = 3 \Rightarrow a_n = a_1 + (n - 1)d$$

$$a_{15} = 3 + 14 \cdot 3$$

$$a_{15} = 44$$

$$1145. a_1 + a_2 + a_3 = 27$$

$$a_1^2 + a_2^2 + a_3^2 = 275$$

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$$a_1 + a_1 + d + a_1 + 2d = 27$$

$$a_1^2 + (a_1 + d)^2 + (a_1 + 2d)^2 = 275$$

$$3a_1 + 3d = 27$$

$$a_1 + d = 9 \rightarrow a_1 = 9 - d$$

$$a_1^2 + a_1^2 + 2a_1d + d^2 + a_1^2 + 4a_1d + 4d^2 = 275$$

$$3a_1^2 + 6a_1d + 5d^2 = 275$$

$$3(81 - 18d + d^2) + 6d(9 - d) + 5d^2 = 275$$

$$243 - 54d + 3d^2 + 54d - 6d^2 + 5d^2 = 275$$

$$2d^2 = 32 \rightarrow d^2 = 16$$

$$d = 4 \vee d = -4$$

$$a_n = a_1 + (n - 1)d$$

$$a_n = 5 + (n - 1)4$$

$$a_n = 5 + 4n - 4$$

$$a_n = 1 + 4n$$