

Ancient Greece
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Equations:

1. $G + H = S1$
2. $G^2 + H^2 = S2$
3. $(S1/2 + X)^2 + (S1/2 - X)^2 = S2$

1. $S1 = 20$
 $S2 = 208$

$$(10 + X)^2 + (10 - X)^2 = 208$$
$$(100 - 2X + x^2) + (100 + 2X + x^2) = 208$$
$$2X^2 + 200 = 208$$
$$2X^2 = 8$$
$$X^2 = 4$$
$$X = 2$$

Numbers = 8 and 12

2. $S1 = 22$
 $S2 = 250$

3. $S1 = 54$
 $S2 = 2106$