

Pythagorean Theorem

Skill: finding the lengths of legs of right triangles

Name Key

What was written on the vegetable farmer's tombstone?

To find the punchline, use a table of square roots or a calculator to find the length of each leg not given to the nearest thousandth. Then, put the corresponding letter above each answer at the bottom of the page.

$a^2 + b^2 = c^2$
 $12^2 + b^2 = 21^2$
 $144 + b^2 = 441$
 $b^2 = 441 - 144$
 $b^2 = 297$
 $b = \sqrt{297}$
 $b = 17.2$

$a^2 + b^2 = c^2$
 $4^2 + b^2 = 18^2$
 $16 + b^2 = 324$
 $b^2 = 324 - 16$
 $b^2 = 308$
 $b = \sqrt{308}$
 $b = 17.5$

$a^2 + b^2 = c^2$
 $9^2 + b^2 = 12^2$
 $81 + b^2 = 144$
 $b^2 = 144 - 81$
 $b^2 = 63$
 $b = \sqrt{63}$
 $b = 6.3$

$a^2 + b^2 = c^2$
 $7^2 + b^2 = 13^2$
 $49 + b^2 = 169$
 $b^2 = 169 - 49$
 $b^2 = 120$
 $b = \sqrt{120}$
 $b = 10.9$

$a^2 + b^2 = c^2$
 $20^2 + 14^2 = c^2$
 $400 + 196 = c^2$
 $596 = c^2$
 $c = \sqrt{596}$
 $c = 24.4$

$a^2 + b^2 = c^2$
 $10^2 + b^2 = 25^2$
 $100 + b^2 = 625$
 $b^2 = 625 - 100$
 $b^2 = 525$
 $b = \sqrt{525}$
 $b = 22.9$

$a^2 + b^2 = c^2$
 $21^2 + b^2 = 26^2$
 $441 + b^2 = 676$
 $b^2 = 676 - 441$
 $b^2 = 235$
 $b = \sqrt{235}$
 $b = 15.3$

$a^2 + b^2 = c^2$
 $12^2 + b^2 = 16^2$
 $144 + b^2 = 256$
 $b^2 = 256 - 144$
 $b^2 = 112$
 $b = \sqrt{112}$
 $b = 10.6$

$a^2 + b^2 = c^2$
 $22^2 + b^2 = 30^2$
 $484 + b^2 = 900$
 $b^2 = 900 - 484$
 $b^2 = 416$
 $b = \sqrt{416}$
 $b = 20.4$

$a^2 + b^2 = c^2$
 $16^2 + b^2 = 12^2$
 $256 + b^2 = 144$
 $b^2 = 144 - 256$
 $b^2 = -112$

R 10.583 cm E 14.283 cm S 17.234 cm T 20.396 cm I 10.954 cm N 17.55 cm

P 22.913 cm E 15.33 cm A 11.18 cm S 6.325 cm