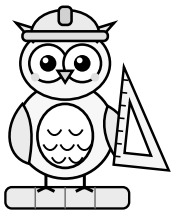
Name : _____ Date : _____

PAPILUMO / 4th Grade (ages 9–10) • Answer key

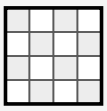
Square Roots & Tiled Squares

Find the side of each tiled square, verify side × side = area, then evaluate all six square roots.



Sacha the architect owl designs square tiled courtyards.
Help him work out the side length of every square!

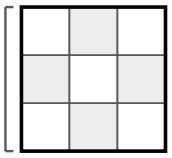
Example: a 4 × 4 square courtyard has 16 tiles, so its side length is 4.

4 

Area = 16 tiles → **side = 4** | $\sqrt{16} = 4$ (because 4 × 4 = 16)

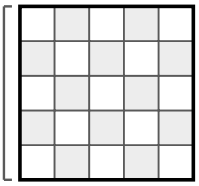
1. Find the side of each tiled square and verify: side × side = area

A **Area = 9 tiles**

side = 3 

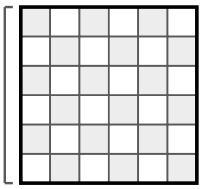
3 × 3 = 9

B **Area = 25 tiles**

side = 5 

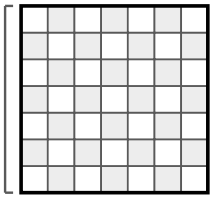
5 × 5 = 25

C **Area = 36 tiles**

side = 6 

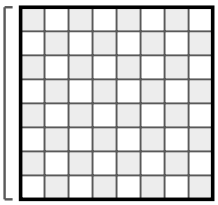
6 × 6 = 36

D **Area = 49 tiles**

side = 7 

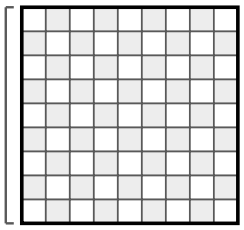
7 × 7 = 49

E **Area = 64 tiles**

side = 8 

8 × 8 = 64

F **Area = 81 tiles**

side = 9 

9 × 9 = 81

2. Evaluate these six square roots directly

1. $\sqrt{4} = 2$
2. $\sqrt{100} = 10$
3. $\sqrt{121} = 11$
4. $\sqrt{144} = 12$
5. $\sqrt{1} = 1$
6. $\sqrt{81} = 9$

Architect tip: finding a square root means asking which whole number multiplied by itself gives that square area.