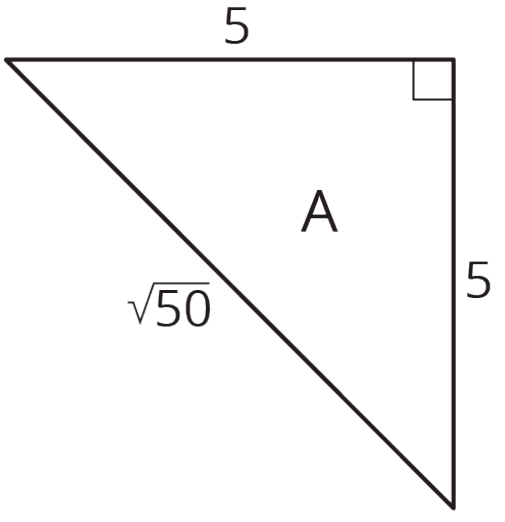
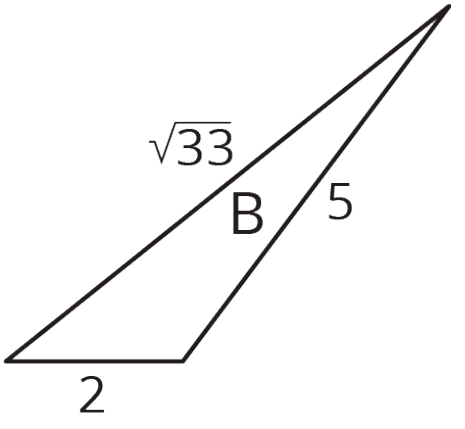
Unit 8 Lesson 5: Finding Side Lengths of Triangles

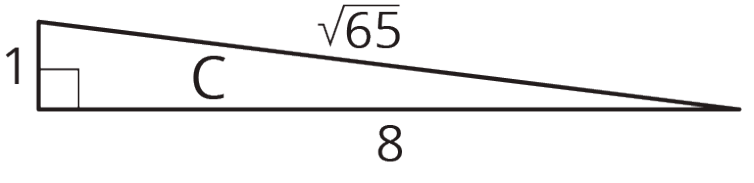
1 Which One Doesn't Belong: Triangles (Warm up)

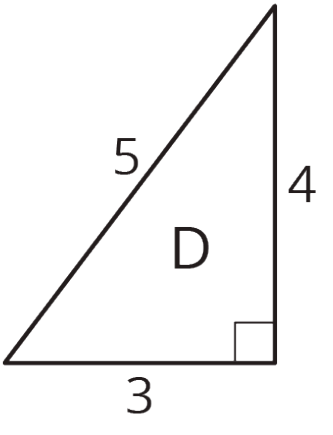
Student Task Statement

Which triangle doesn't belong?



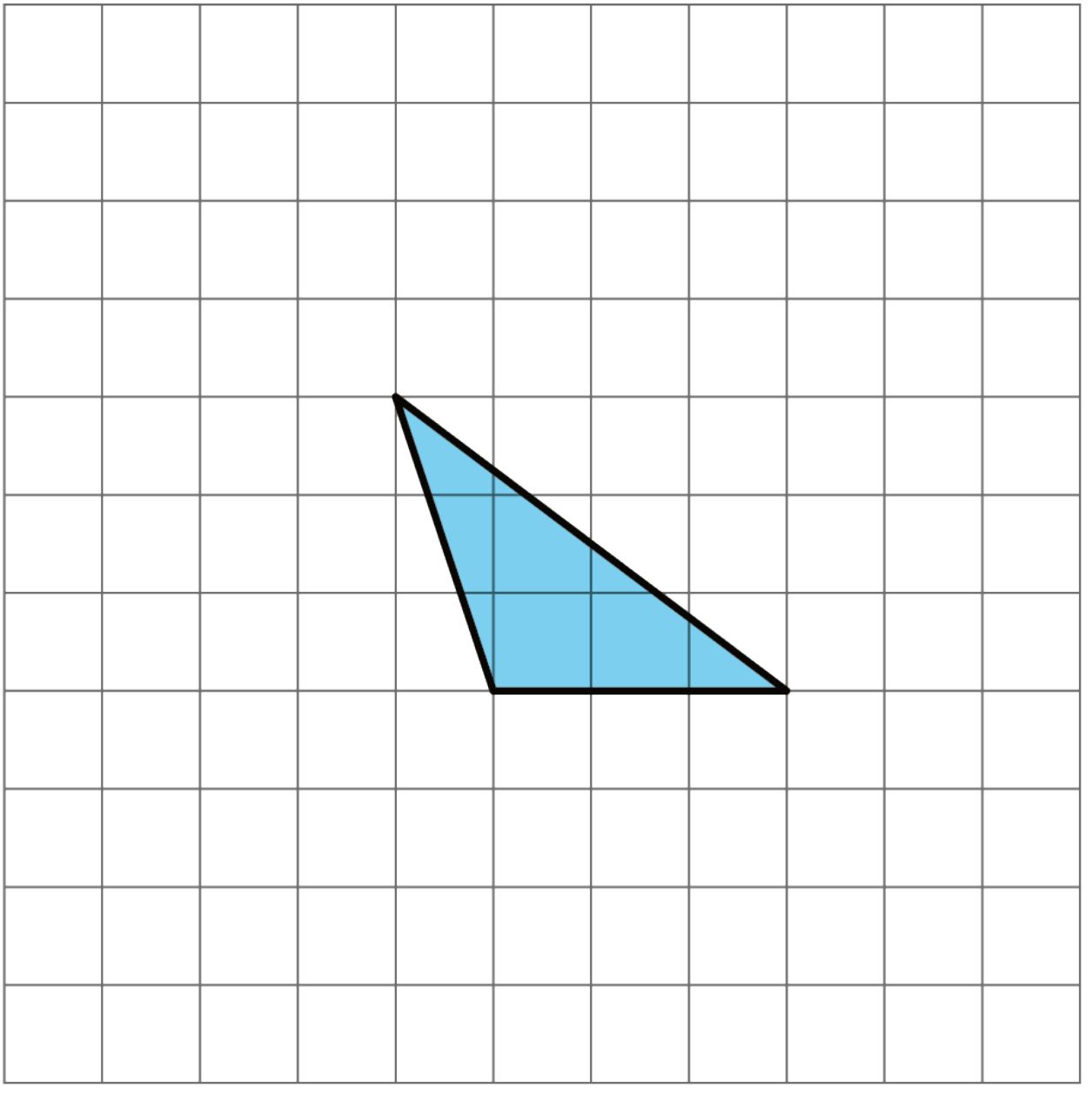


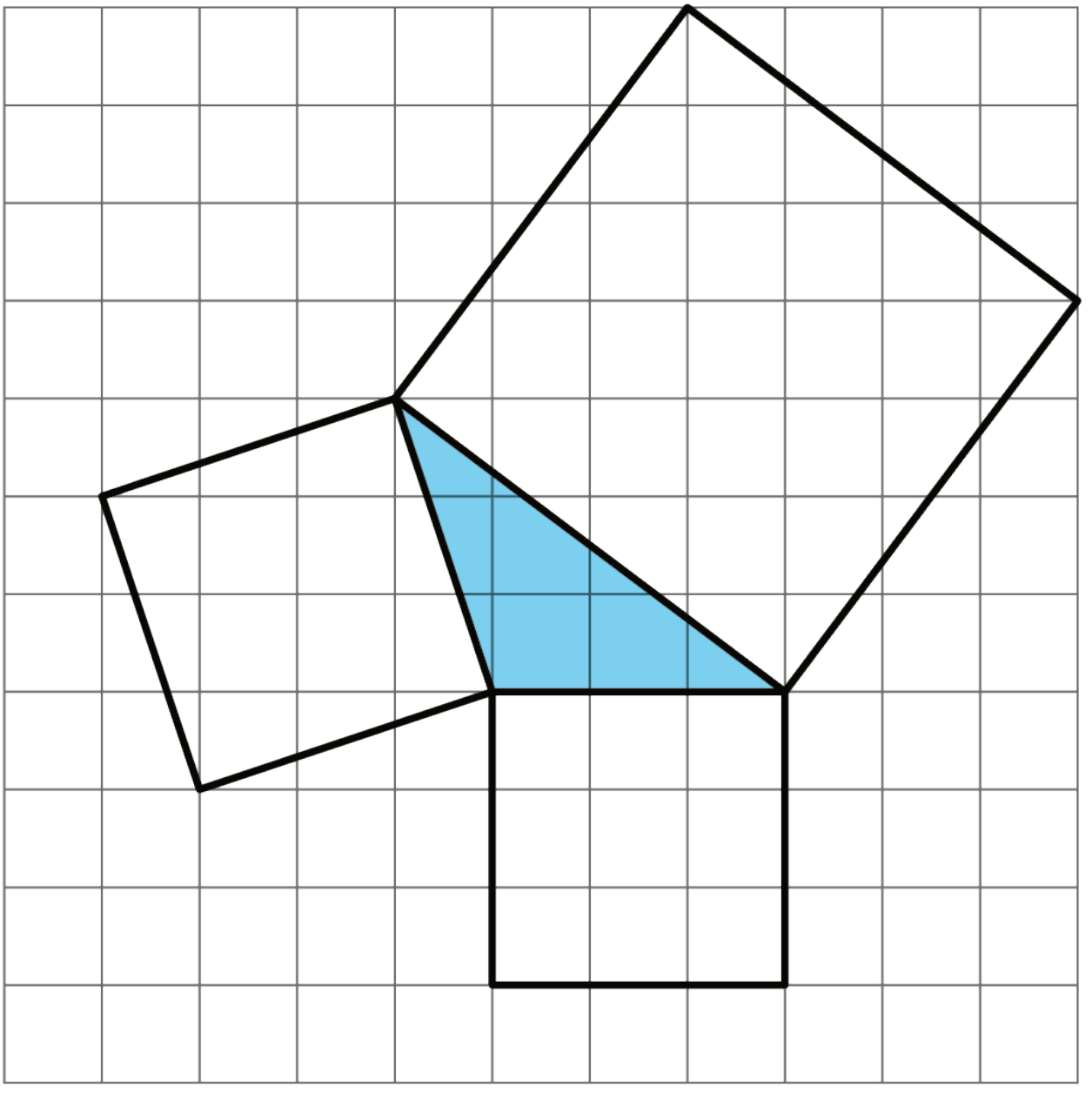




2 A Table of Triangles

Images for Launch

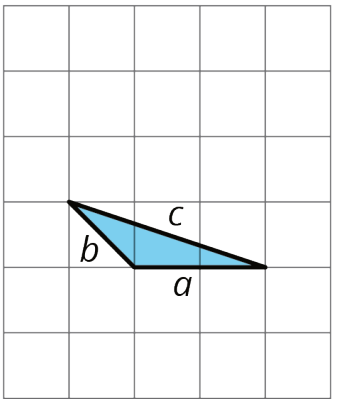




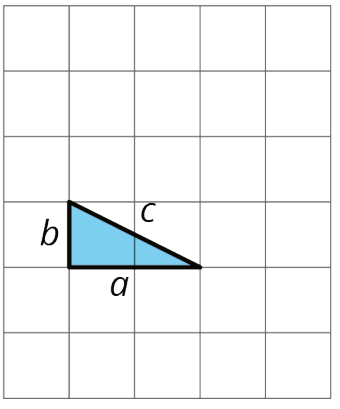
Student Task Statement

1. Complete the tables for these three triangles:

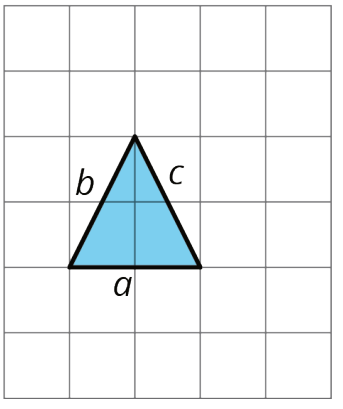
D



E



F



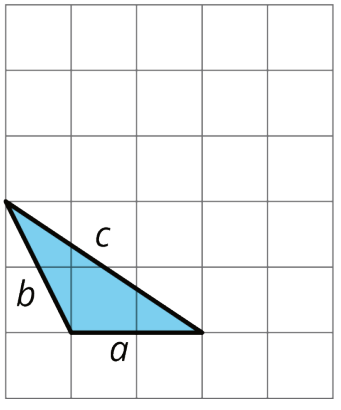
triangle	a	b	c
D			
E			
F			

triangle	a^2	b^2	c^2
D			
E			
F			

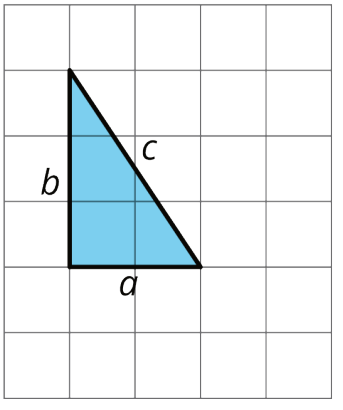
2. What do you notice about the values in the table for Triangle E but not for Triangles D and F?

3. Complete the tables for these three more triangles:

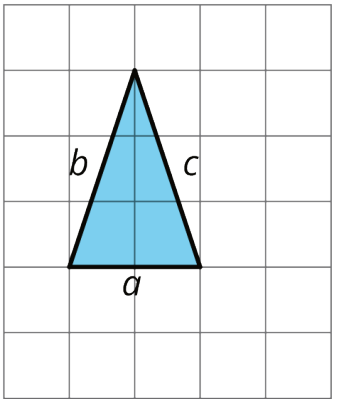
P



Q



R



triangle	a	b	c
P			
Q			
R			

triangle	a^2	b^2	c^2
P			
Q			
R			

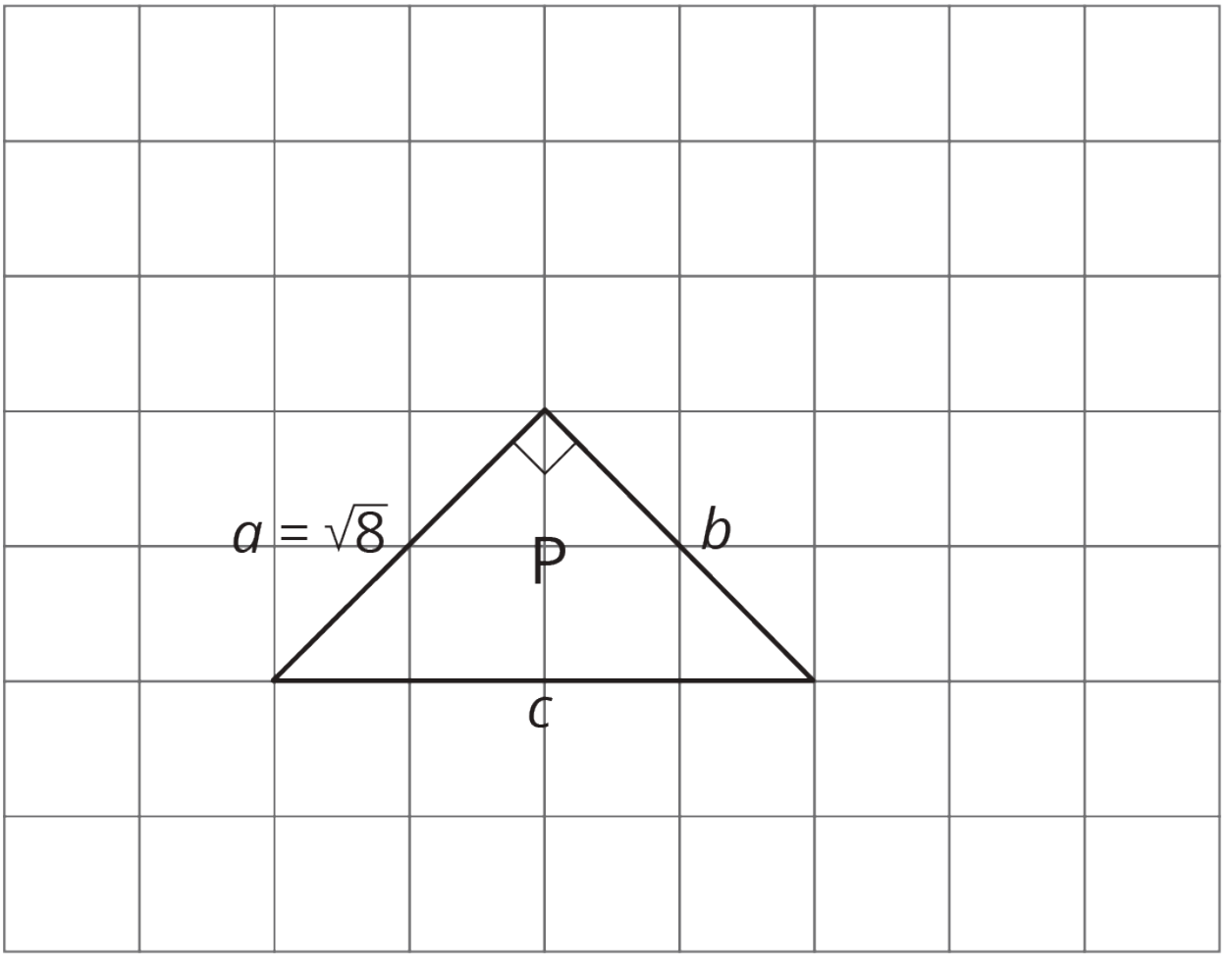
4. What do you notice about the values in the table for Triangle Q but not for Triangles P and R?

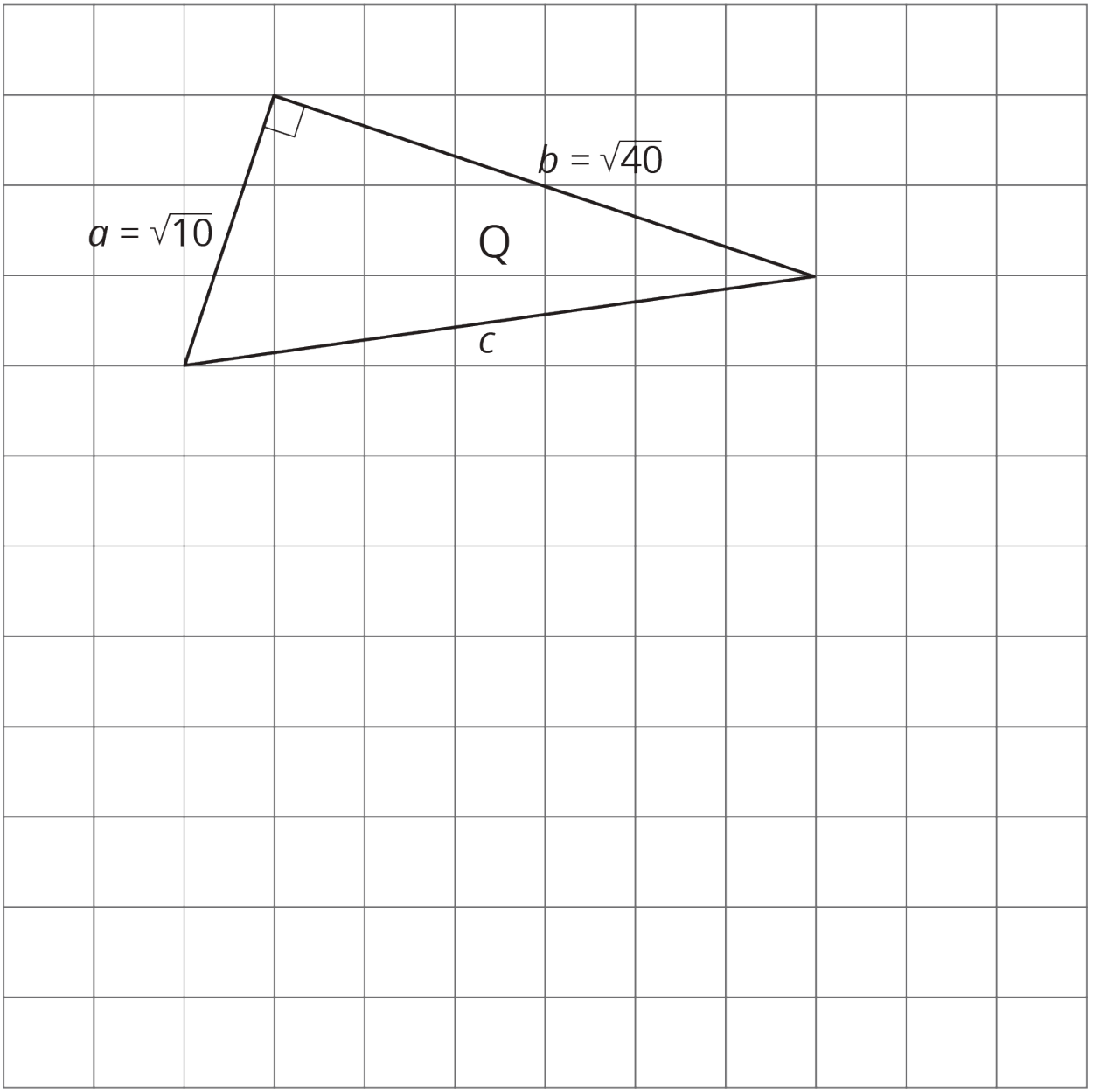
5. What do Triangle E and Triangle Q have in common?

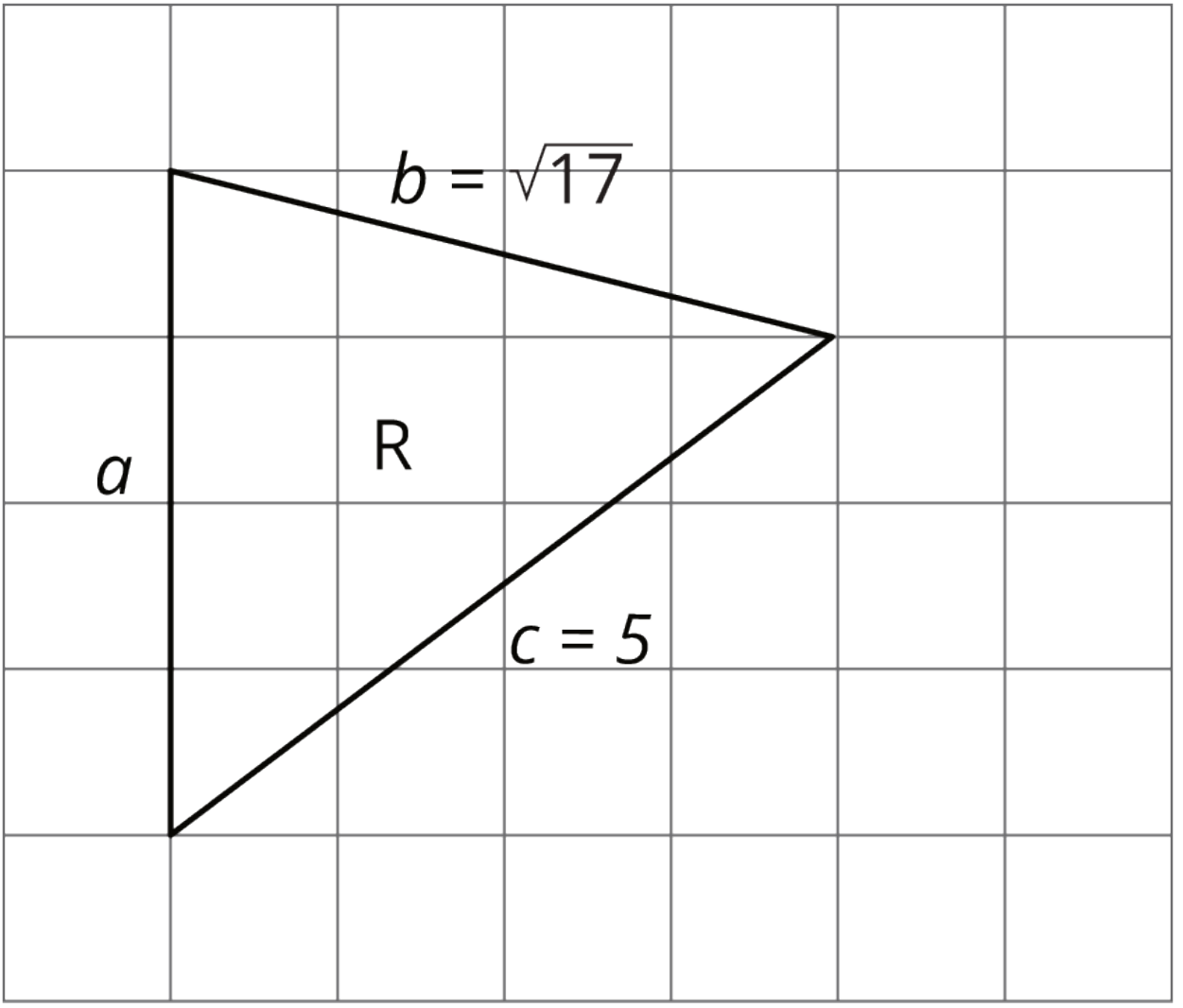
3 Meet the Pythagorean Theorem

Student Task Statement

1. Find the missing side lengths. Be prepared to explain your reasoning.
2. For which triangles does $a^2 + b^2 = c^2$?




$b = \sqrt{40}$
$a = \sqrt{10}$
Q
c


$b = \sqrt{17}$
R
a
$c = 5$