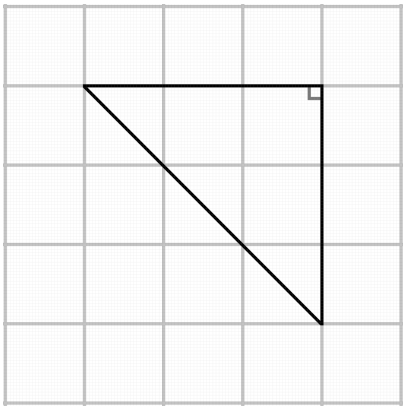
Name: _____ Date: _____

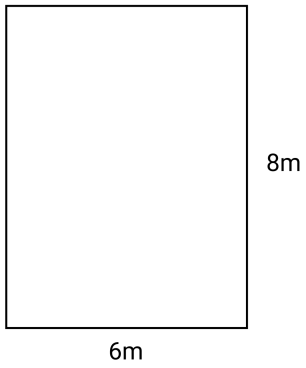
1. A right triangle is shown below.

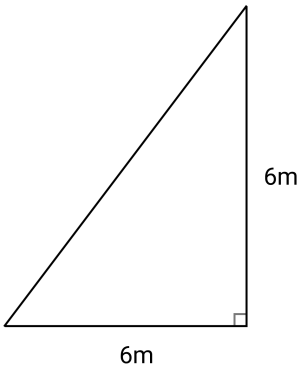


a. Estimate the area of the right triangle without calculating. Show or explain how you determined your response.

b. Use the area formula for a triangle to find the exact area of the triangle.

2. A student is given a rectangle and a triangle as shown below.



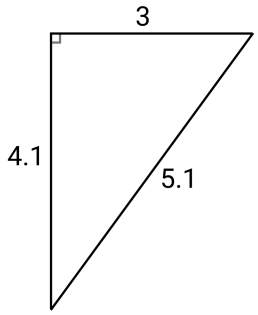


The student recalls that the area of a triangle is $\frac{1}{2}$ the area of a rectangle. The student then finds the area of the triangle by calculating:

$$\frac{1}{2}(6 \times 8) = \frac{1}{2}(48) = 24\text{m}^2$$

Explain the error the student made. Then find the correct area of the triangle.

3. Another student found the area of a different right triangle. His work is shown below.



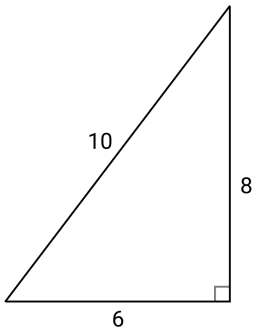
$A = 3(4.1)$

$A = 12.3\text{u}^2$

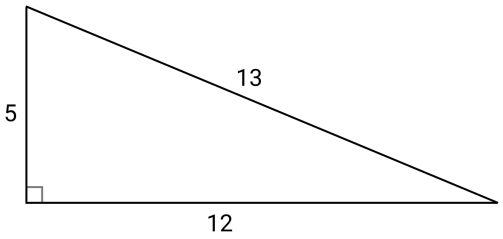
Explain the error the student made. Then find the correct area of the triangle.

4. Find the areas of the right triangles below.

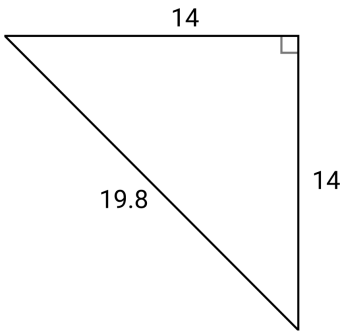
a.



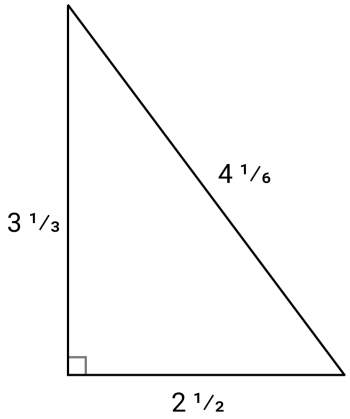
b.



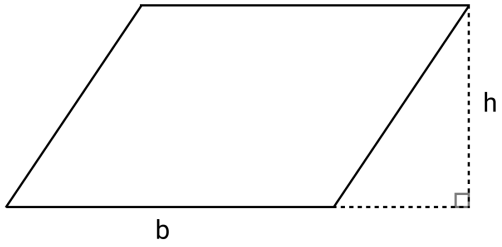
c.

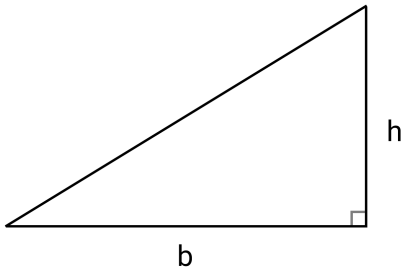


d.



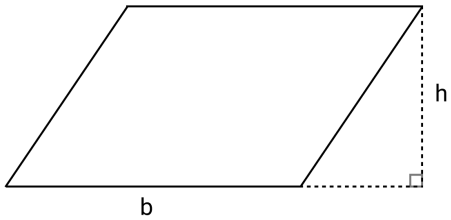
5. A parallelogram and right triangle are shown below. They have the same base and height.

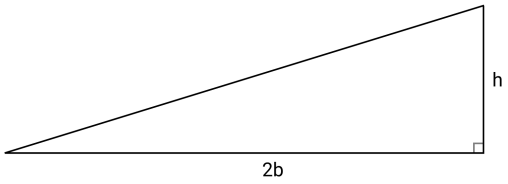




Is the area of the triangle greater than, less than, or the same as the parallelogram? Explain how you know.

6. A parallelogram and right triangle are shown below. The base of the triangle is twice the length of the base of the parallelogram.





Is the area of the triangle greater than, less than, or the same as the parallelogram? Explain how you know.