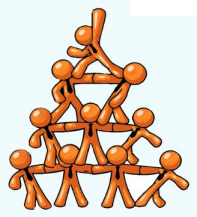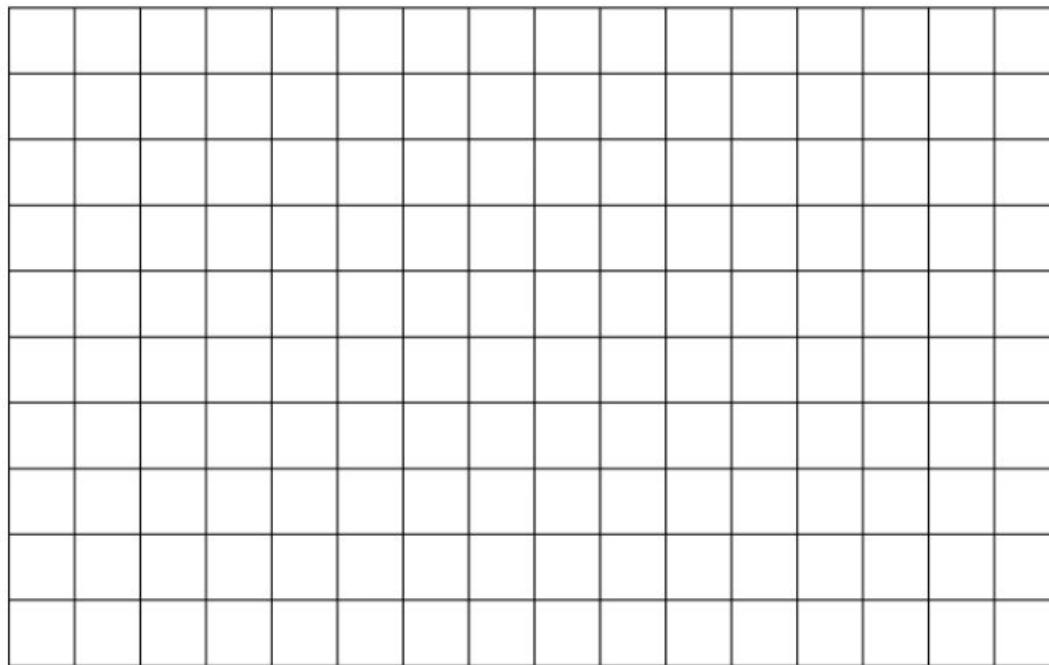# 1-10: Learning Goals

- Let's use different base-height pairs to find the area of a triangle.

1-10-1: An Area of 12

On the grid, draw a triangle with an area of 12 square units. Try to draw a non-right triangle. Be prepared to explain how you know the area of your triangle is 12 square units.
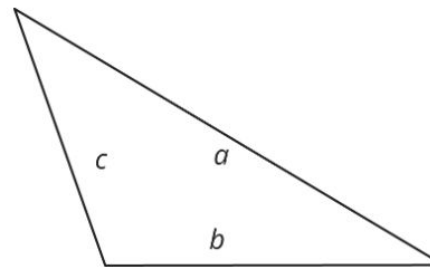
1-10-2: Hunting for Heights

1. Here are three copies of the same triangle. The triangle is rotated so that the side chosen as the base is at the bottom and is horizontal. Draw a height that corresponds to each base. Use an index card to help you.
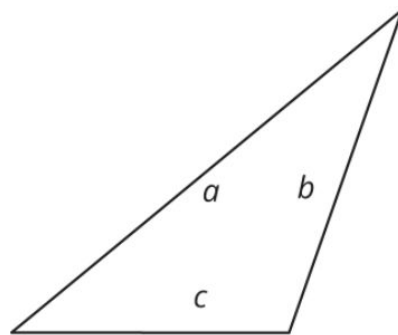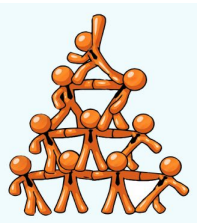
Side a as the base:
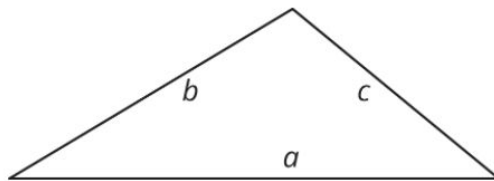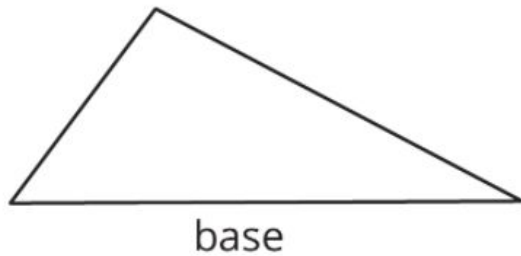
Side b as the base:

Side c as the base:

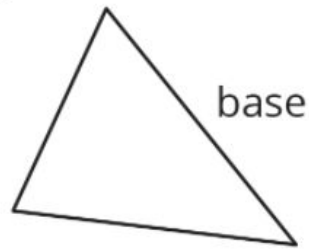Pause for your teacher's instructions before moving to the next question.

1-10-2: Hunting for Heights

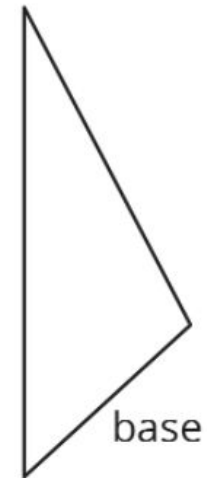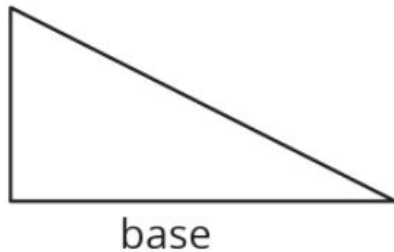2. Draw a line segment to show the height for the chosen base in each triangle.

A

base

B

base

C

base

D

base

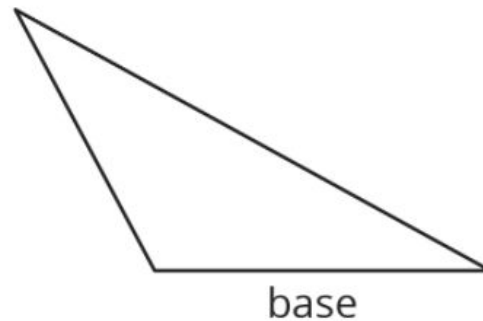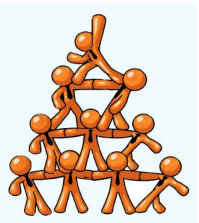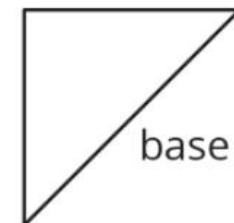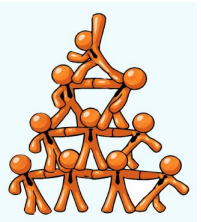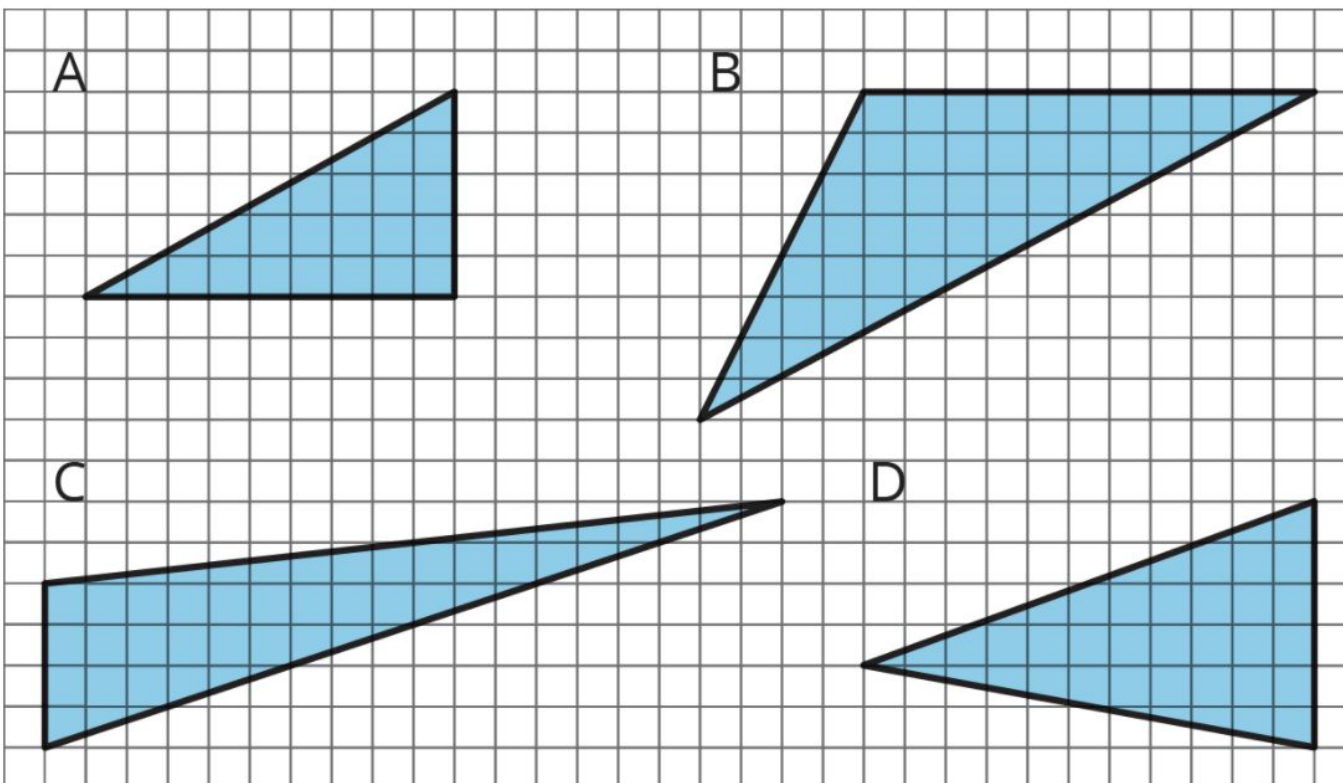E

base

F

base

1-10-3: Some Bases Are Better Than Others

For each triangle, identify and label a base and height. If needed, draw a line segment to show the height.

Then, find the area of the triangle. Show your reasoning. (The side length of each square on the grid is 1 unit.)

1-10: Lesson Synthesis

- What must we remember about the relationship between a base of a triangle and its corresponding height?

- What tools might help us draw a height segment? What is it about an index card or a ruler that helps us?

- Does it matter which side we choose as the base? How do we decide?
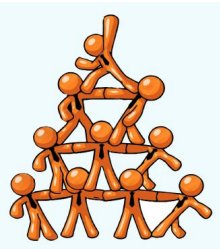
1-10: Learning Targets

- I can identify pairs of base and corresponding height of any triangle.

- When given information about a base of a triangle, I can identify and draw a corresponding height.

1-10-4: Stretched Sideways

1. For each triangle below, draw a height segment that corresponds to the given base, and label it h. Use an index card if needed.

A

base

B

base
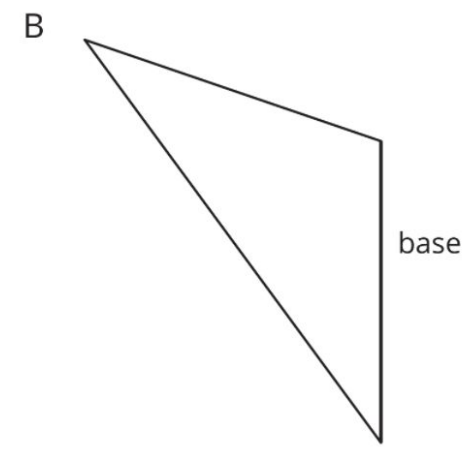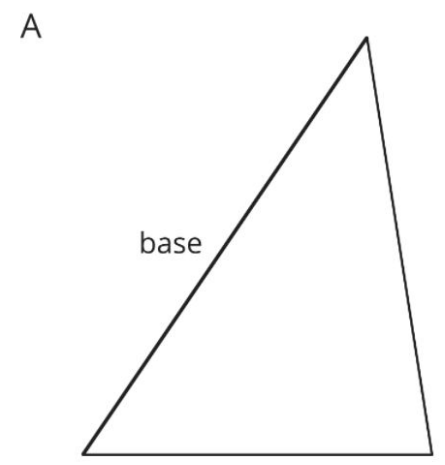
2. Which triangle has the greatest area? The least area? Explain your reasoning.

A   B   C   D