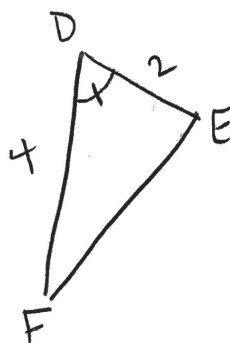
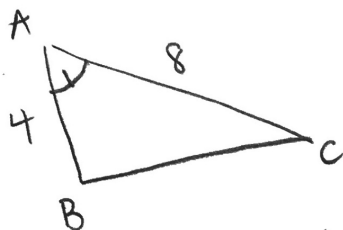


# MORE ON SIMILARITY AND TRIANGLES

## SAS SIMILARITY SHORTCUT

IF 2 SIDES IN ONE TRIANGLE ARE PROPORTIONAL TO 2 SIDES IN ANOTHER TRIANGLE, AND THE INCLUDED ANGLES ARE CONGRUENT, THEN THE TRIANGLES ARE SIMILAR



IF  $\Delta$ s ARE SIMILAR BY 2:1, THEN:

PERIMETER: 2:1

AREA: 4:1

$$\frac{\frac{1}{2}bh}{\frac{1}{2}(2b)(2h)} = \frac{1}{(2)^2} = \frac{1}{4}$$

LIKEWISE,

IF TRIANGLES ARE RELATED BY 3:1,

PERIMETER RATIO  $\rightarrow$  3:1

AREA RATIO  $\rightarrow (3)^2:1 \rightarrow 9:1$