

Finding the Area of a Right Triangle script.

Building the Ladder

- T: Draw a square.
S: (Draw square.)
T: Shade one half of the square...share your drawings with your partner...did anyone shade it differently than their partner?
S: (Extract the diagonal shading.)
- T: (Shade 3 x 2 rectangle.) How many units are shaded?
S: 6.
T: Say the area.
S: 6 square units
- Repeat process for 4 x 3 rectangle and 6 x 4 rectangle.

Problem 1

- T: (Project 3 cm by 2 cm right triangle over 1-cm grid paper.) What's the area of the shaded figure?...How do you know?...turn and talk.
S: (Extract that it has to be half of 6 square cm so it's 3 square cm.)
T: Write a 3-step number sentence to show how you got your answer.
S: ($3 \times 2 \div 2$ will be the likely response.)
T: Can anyone express it as a 3-step multiplication sentence? Turn and talk to your partner.
S: (Extract $\frac{1}{2} \times 3 \times 2$)
- Repeat process for the other two triangles.

Problem 2

- T: (Project a 10 cm by 6 cm triangle with the base partitioned into 4 units and 2 units.) What do you think the area of this triangle is? Turn and talk to your partner.
S: (Expect many students to say 30 square cm because they already have a formula.)
T: Using the grid, can you prove that that the answer is 30 square cm? (guide students to break the triangle into a composite of two right triangles.)

Problem 3

Repeat task #2b process for an obtuse triangle with a base of 8 cm, height of 4 cm, and a 2 cm by 4 cm right triangle that can be removed from a 10 cm by 4 cm right triangle.