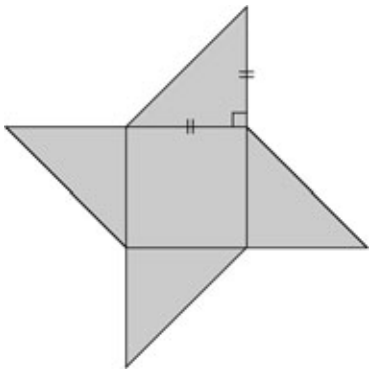
Name: _____ Date: _____

BLM 3–17

Section 3.5 Math Link

This worksheet will help you with the Math Link on page 111.



Give your answers to the following questions to the nearest tenth of a centimetre where appropriate.

1. a) How do you find the side length of a square if you know the area?

b) What is the side length of the central square in the game board if it has an area of 225 cm^2?

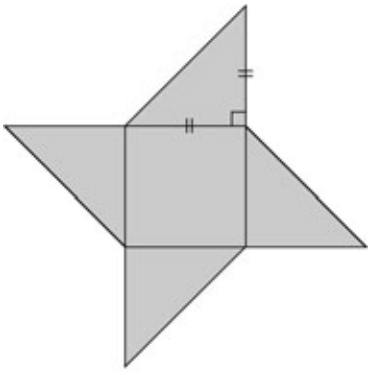
c) How is the side length of the central square related to the length of each leg of the right triangles?

d) What is the length of each leg of the right triangles?

e) What is the length of the hypotenuse of the right triangles? Show your work.

f) On the diagram above, label all of the leg lengths and hypotenuse lengths around the perimeter of the game board. What is the perimeter of the game board?

2. The game will be packaged in a box with a square base.



a) On the diagram, draw the smallest square box that you can around the game board. The square box should just touch each outside vertex of the four triangles.

b) Draw a diagonal line through the square box.

c) Using the diagonal line as the hypotenuse, draw a right triangle over the diagram. Draw the legs of the right triangle so that you will be able use the known measurements of the game board to determine the length of each leg.

d) Determine the length of each leg of the right triangle. Show your work.

e) On the diagram, label the length of each leg of the right triangle.

f) Use the Pythagorean relationship to determine the length of the diagonal line. Show your work.