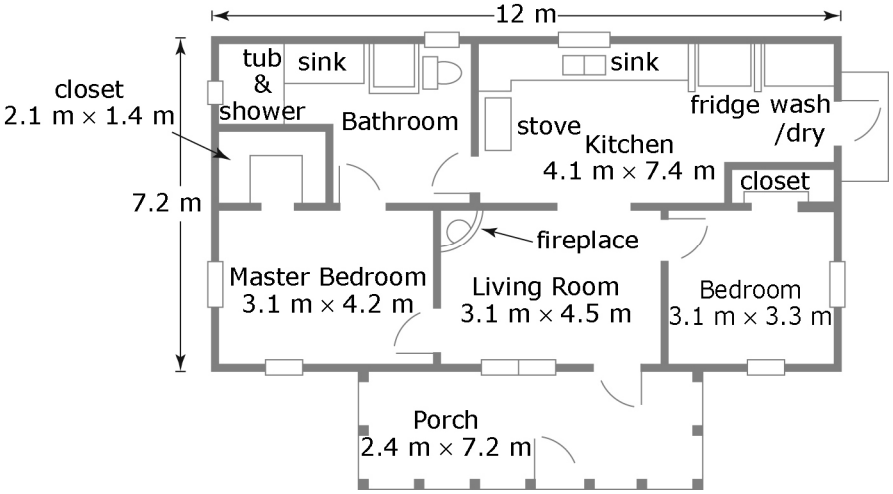
Name: _____ Date: _____

BLM 4–1

Chapter 4 Math Link Introduction

This worksheet will help you with the Math Link introduction on page 129.

Use the floor plan to answer the following questions.
- Express all actual lengths in centimetres.
- Calculate all areas in square centimetres.
- For #1 and 2, express answers to the nearest tenth.



1. a) What is the area of the actual house? Include the porch.

Hint: Use the formula $A = l \times w$.

	House	Porch
Length	_____ m = _____ cm	_____ m = _____ cm
Width	_____ m = _____ cm	_____ m = _____ cm
Area	_____ cm^2	_____ cm^2
Total Area	_____ cm^2	

b) What is the area of the house on the blueprint? **Hint:** Use a ruler.

	House	Porch
Length	_____ m = _____ cm	_____ m = _____ cm
Width	_____ m = _____ cm	_____ m = _____ cm
Area	_____ cm^2	_____ cm^2
Total Area	_____ cm^2	

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(continued)

2. a) What is the area of the actual living room?

Length = _____ m = _____ cm Width = _____ m = _____ cm

Area = _____ cm^2

b) What is the area of the living room on the blueprint?

Length = _____ cm Width = _____ cm Area = _____ cm^2

3. a) What is the ratio of the area of the actual house to the area of the blueprint house? Express your answer to the nearest thousand.

Note: A ratio compares quantities measured in the same units. Since each area is expressed in square centimetres, you can compare the areas.

$$\frac{\text{area of actual house}}{\text{area of blueprint house}} = \frac{\square}{\square} = \_\_\_\_\_\ cm^2 = \_\_\_\_\_\ cm^2$$

b) What is the ratio of the area of the actual living room to the area of the blueprint living room?

$$\frac{\text{area of actual living room}}{\text{area of blueprint living room}} = \frac{\square}{\square} = \_\_\_\_\_\ cm^2 = \_\_\_\_\_\ cm^2$$

c) Compare the two ratios. What can you conclude about the two ratios?

_____

d) What ratio do you expect for the areas of the actual and blueprint master bedrooms? Explain why.

_____

_____

4. a) Why do you think accuracy is important in developing a floor plan?

_____

b) Why is it important to keep the same proportions for the dimensions of an actual object and a drawing of the object?

_____

_____

5. Discuss with a partner two different examples in which ratios are used to compare objects in daily life. For example, you might consider how photographers and artists use ratios.