

Quiz first

Chapter 6
Geometry & Measurement

Lesson 8

Day 2

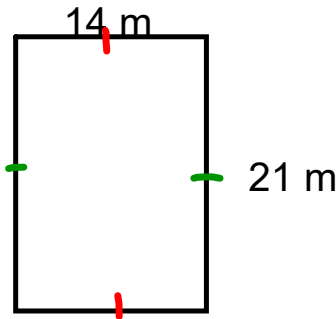
a) Find the area and perimeter of the rectangle

Test May 8

$$A_{\square} = L \times W$$

$$= 21\text{m} \times 14\text{m}$$

$$= 294\text{m}^2$$



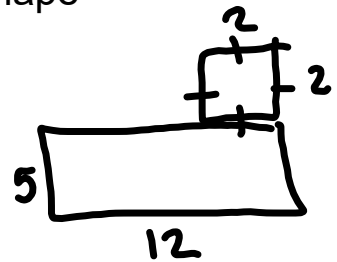
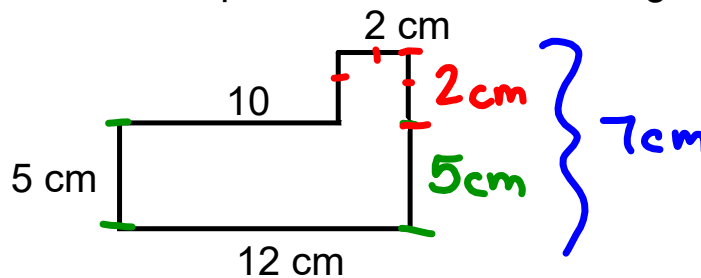
$$P = 2(L + w)$$

$$= 2(14\text{m} + 21\text{m})$$

$$= 2(35\text{m})$$

$$P = 70\text{m}$$

b) Find the area and perimeter of the following shape



$$P = S + S + S + S + S + S$$

$$= 2\text{cm} + 7\text{cm} + 12\text{cm} + 5\text{cm} + 10\text{cm} + 2\text{cm}$$

$$= 38\text{cm}$$

Area of Shape = $\frac{2 \times 2}{2} + 5 \times 12$

$$A = L \times W$$

$$= 2\text{cm} \times 2\text{cm}$$

$$= 4\text{cm}^2$$

$$A = L \times W$$

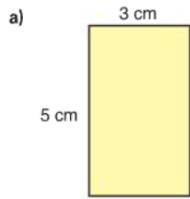
$$= 5\text{cm} \times 12\text{cm}$$

$$+ = 60\text{cm}^2$$

$$= 64\text{cm}^2$$

Practice

1. Find the area of each rectangle.



$$A = L \times W$$

$$= 3 \text{ cm} \times 5 \text{ cm}$$

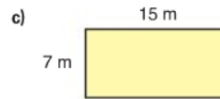
$$= 15 \text{ cm}^2$$



$$A = L \times W$$

$$= 18 \text{ mm} \times 10 \text{ mm}$$

$$= 180 \text{ mm}^2$$



$$A = L \times W$$

$$= 15 \text{ m} \times 7 \text{ m}$$

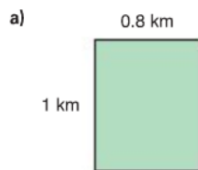
$$= 105 \text{ m}^2$$

2. Which rectangle below do you think has the greatest area?

Estimate first. Use a formula to check.

Order the areas from least to greatest.

How does the order compare with your prediction?

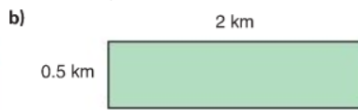


$$A = L \times W$$

$$= 1 \text{ km} \times 0.8 \text{ km}$$

$$= 0.8 \text{ km}^2$$

middle

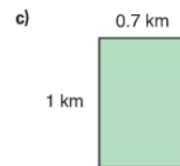


$$A = L \times W$$

$$= 0.5 \text{ km} \times 2 \text{ km}$$

$$= 1 \text{ km}^2$$

greatest



$$A = L \times W$$

$$= 1 \text{ km} \times 0.7 \text{ km}$$

$$= 0.7 \text{ km}^2$$

least

3. Copy and complete this chart.

Rectangle	Length (cm)	Width (cm)	Area (cm ²)
A	7	5	?
B	?	6	12.6
C	3	?	13.5
D	5.3	7	?

Which strategy did you use to find the missing number each time?

A) $A = L \times W$
 $= 7 \text{ cm} \times 5 \text{ cm}$
 $= 35 \text{ cm}^2$

B) $A = L \times W$
 $12.6 \text{ cm}^2 = ? \text{ cm} \times 6 \text{ cm}$

length = Area ÷ base

$$\text{Length} = 12.6 \text{ cm}^2 \div 6 \text{ cm}$$

$$= 2.1 \text{ cm}$$

C) $A = L \times W$
 $13.5 \text{ cm}^2 = 3 \text{ cm} \times ? \text{ cm}$

Base = Area ÷ Length

$$\text{Base} = 13.5 \text{ cm}^2 \div 3 \text{ cm}$$

$$= 4.5 \text{ cm}$$

D) $A = L \times W$
 $= 5.3 \text{ cm} \times 7 \text{ cm}$
 $= 37.1 \text{ cm}^2$



RECALL

Area of Rectangle = Length x Width



You always write out the formula then sub values in.

It does not matter which measurement you use as the length or the width



Given the following determine the missing amount?

- 1) Area of rectangle is 36 cm². Find the width of the rectangle if the length is 4 cm? (Show work)

$$A = L \times W$$

$$36\text{cm}^2 = 4\text{cm} \times ?$$

↓
9cm
(mentally)

$$\text{OR } \frac{A}{L} = \frac{36\text{cm}^2}{4\text{cm}} = 9\text{cm}$$

Study

$$W = A \div L$$

- 2) Area of rectangle is 78.4 cm². Find the length of the rectangle if the width is 7 cm? (Show work)

$$A = L \times W$$

$$78.4\text{cm}^2 = ? \times 7\text{cm}$$

↓
11.2cm

Study

$$L = A \div W$$

$$\begin{array}{r} 11.2 \\ 7 \overline{) 78.4} \\ \underline{70} \\ 84 \\ \underline{77} \\ 14 \\ \underline{14} \\ 0 \end{array}$$

So we can rearrange

$$A = L \times W$$

to find length or width

Student



$$\text{Length} = \text{Area} \div \text{width}$$

$$\text{Width} = \text{Area} \div \text{length}$$

This is good to use when we struggle to do math in our head

3) Area of rectangle is 26.64 cm^2 . Find the width of the rectangle if the length is 7.4 cm ? (Show work)

Use calculators

$$W = A \div L$$

$$= 26.64 \text{ cm}^2 \div 7.4 \text{ cm}$$

$$W = 3.6 \text{ cm}$$

Class/Homework

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~~#4~~ ~~6~~ ~~8~~ ~~9~~

4, 6, 9

If talking
5, 7, 8

Worksheet

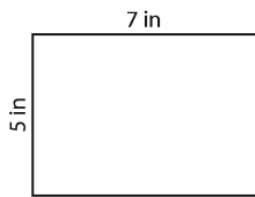
Test May 9

Worksheet

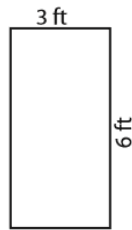
Area of a Rectangle

Find the area of each rectangle.

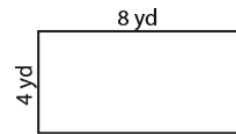
1)



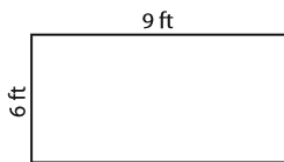
2)



3)



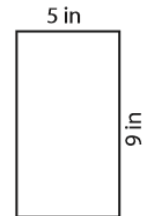
4)



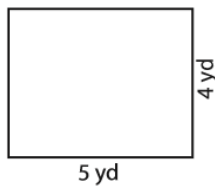
5)



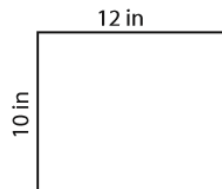
6)



7)



8)



9)



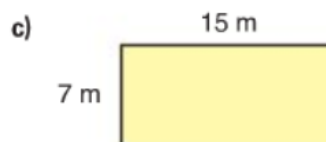
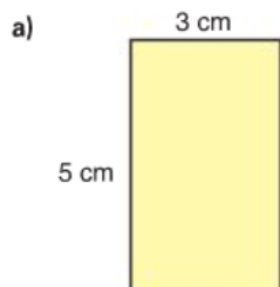
Area =

Area =

Area =

Practice

1. Find the area of each rectangle.

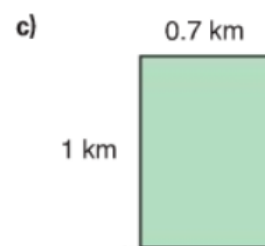
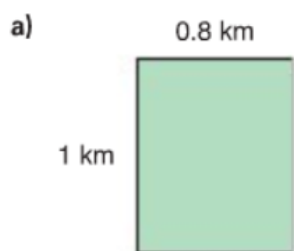


2. Which rectangle below do you think has the greatest area?

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3. Copy and complete this chart.

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Which strategy did you use to find the missing number each time?

4. Matt's dog has a rectangular dog run.
The length of the dog run is 8 m. The total area enclosed is 56 m^2 .
How wide is the dog run? Draw a diagram.
How can you use a number sentence to show your thinking?

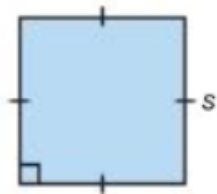


5. Lena used 36 m of fencing to enclose a rectangular vegetable garden on her farm in Battleford, Saskatchewan.
 - a) Sketch some possible rectangles and label their side lengths.
What is the area of the enclosed section in each case?
 - b) How many different answers can you find?

6. A banner for the Vancouver 2010 Olympics has length 226 cm and width 72 cm. What is the area of the banner?

7. Hailey bought a can of stain. The stain will cover 50 m^2 of fencing. The fence has height 2 m. What length of fencing can Hailey stain before she runs out of stain? How did you find out?

8. A square has side length s .



Write a formula for the area of a square.

9. The Festival du Voyageur is a winter festival that takes place in St. Boniface, Manitoba, each February. The festival's logo contains a red rectangle. Suppose the logo is enlarged so the rectangle has width 4 cm and area 28.8 cm^2 . What is the length of the rectangle? How did you find out?



10. Rectangle A has area 40 cm^2 and length 8 cm.
The area of Rectangle B is one-half the area of Rectangle A.
The rectangles have the same length.
What is the width of Rectangle B?