MEASUREMENT

- estimate, measure, and record quantities, using the metric measurement system

- determine the relationships among units and measurable attributes, including the area of a parallelogram, the area of a triangle, and the volume of a triangular prism

FIRST NAME, LAST NAME:	CLASS:

Name:

Here is the plan for the Kindergarten playspace to be built at Dixon Grove JHS. A fence will be built to prevent students from leaving the playground. Foam square safety tiles that are 1 m x 1 m will be laid down to protect students from injury.
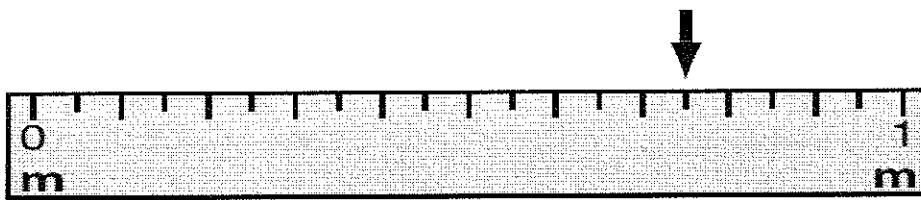
4 m

2 m

4 m

2 m

How much fencing do the contractors need?
How many tiles do they need?
Explain your thinking

4 Frank measures the width of a desk by using a metre stick. He marks a spot on the metre stick to indicate the width of the desk, as shown below.

Which is closest to the width of the desk?

F   0.70 metres

G   0.75 metres

H   15 centimetres

J   80 centimetres

16 Sometimes measurement can be estimated, and at other times it must be very accurate. A list of locations where running times might be measured is shown below.

1. Olympics

2. on the playground

3. school track meet

Which list shows the locations in order from the greatest to the least need for accuracy?

F   3, 2, 1

G   3, 1, 2

H   1, 2, 3

J   1, 3, 2

2 Joseph has a measuring wheel that clicks once for every metre he walks. How many times will the wheel click when Joseph walks 2.6 km?

    a   2

    b   26

    c   260

    d   2600

Explain your thinking:

19 Which unit of measure is most appropriate to describe the length of a page in a textbook?

    a centimetre

    b kilometre

    c metre
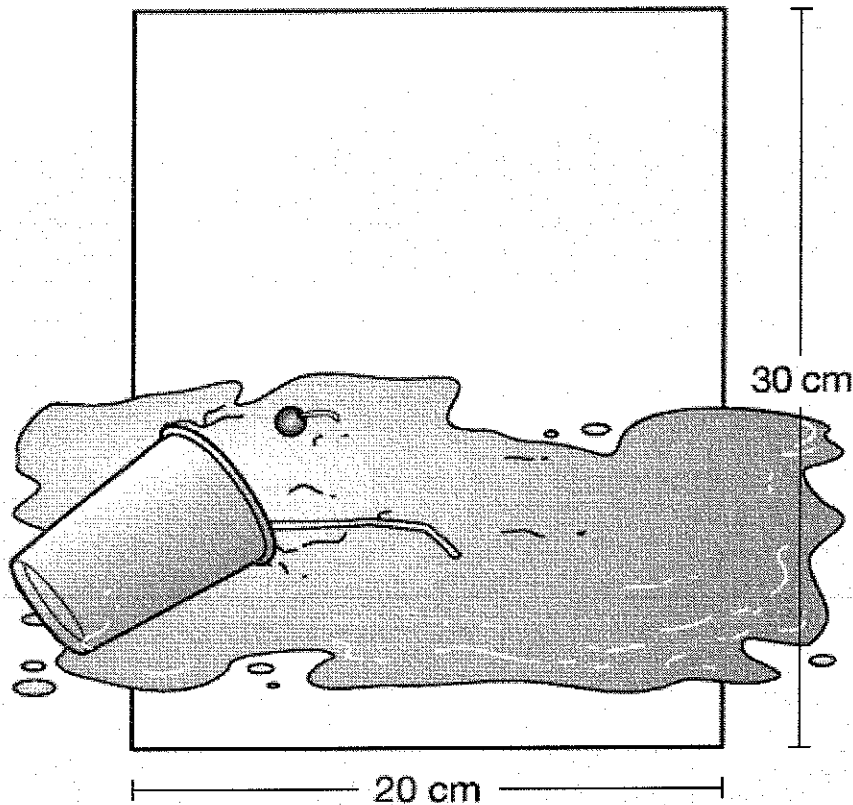
    d millimetre

21 Which is equivalent to 1 m^2?

    a 10 cm^2

    b 100 cm^2

    c 1000 cm^2

    d $10\,000 \text{ cm}^2$

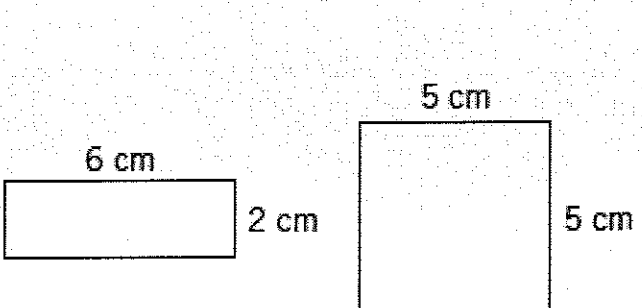**33** Samantha spills a milkshake on a rectangular piece of paper as shown below.

30 cm

20 cm
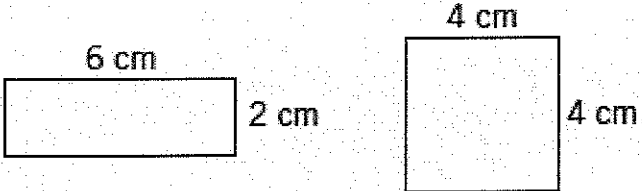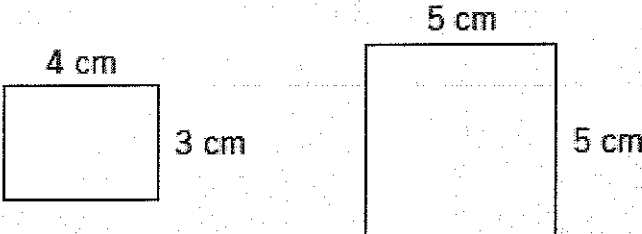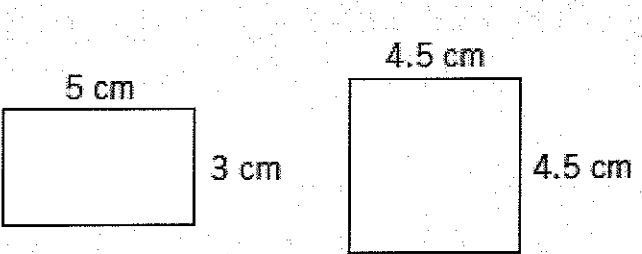
Which of the following **best** approximates the area of the entire spill?

a 100 cm^2

b 300 cm^2

c 400 cm^2

d 600 cm^2

32 Ms. Vanstone asks her students to draw a rectangle and a square with the areas and perimeters given below.

	Rectangle	Square
Area	12 cm²	25 cm²
Perimeter	16 cm	20 cm

Which shows two correct drawings?

a

6 cm
2 cm

4 cm
4 cm

b

4 cm
3 cm

5 cm
5 cm

c

5 cm
3 cm

4.5 cm
4.5 cm

d

6 cm
2 cm

5 cm
5 cm

11 Susie wants to tile the floor of her family's rectangular play room. The tiles she plans to use are 10 cm by 10 cm squares. A drawing of the room is shown below.

10 m

5 m
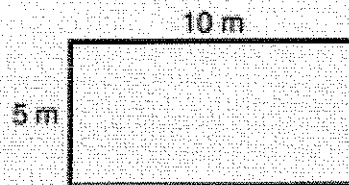
How many of the square tiles will Susie need to cover the floor of the play room?

Show your work.

Susie will need _____ tiles.

**22** Look at the two parallelograms below.

2 cm

2 cm

18 cm

14 cm
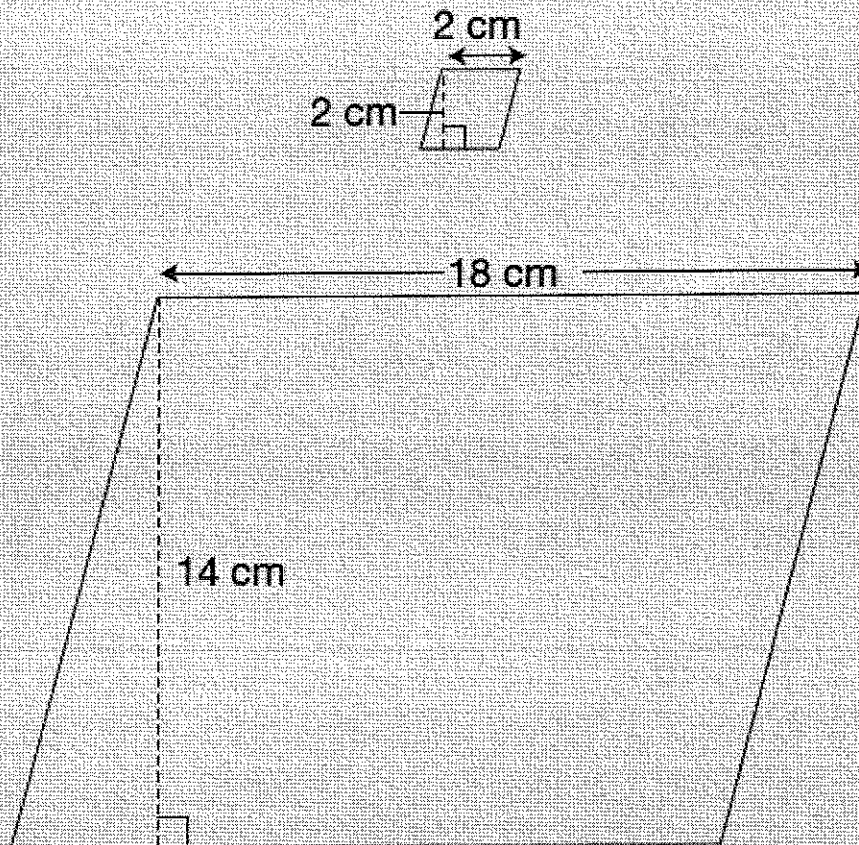
What is the minimum number of small parallelograms needed to cover the larger parallelogram completely?
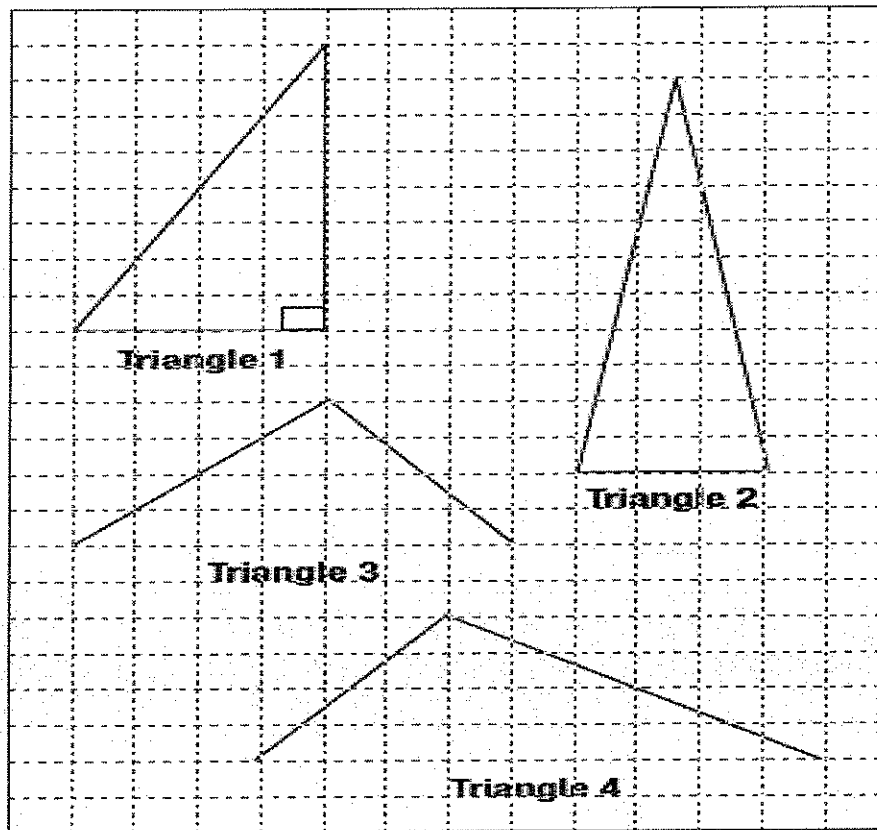
a 16

b 63

c 126

d 252

15 An artist has some paintings that are rectangular and some that are parallelograms. One of her paintings is shaped like the rectangle shown below.
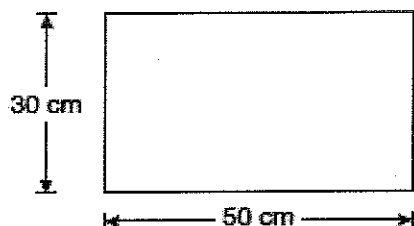
Which of the following parallelograms has the same area as the rectangle?

A

B

C

D
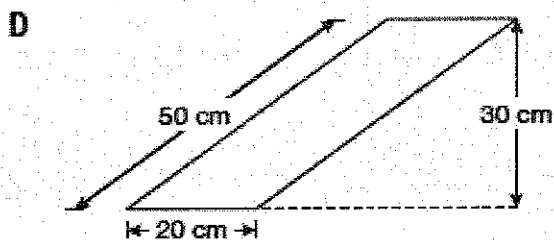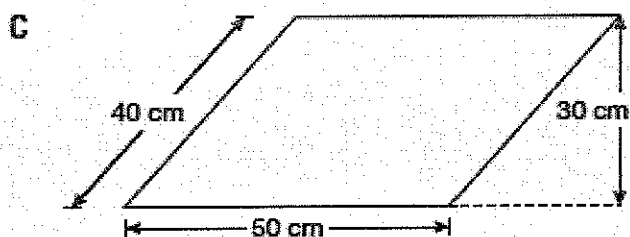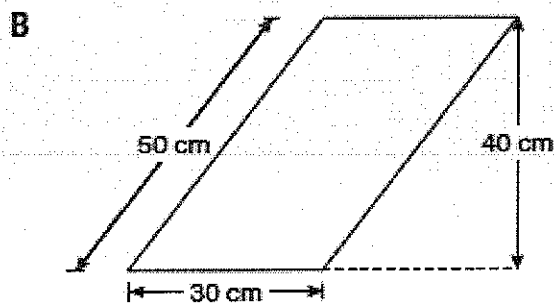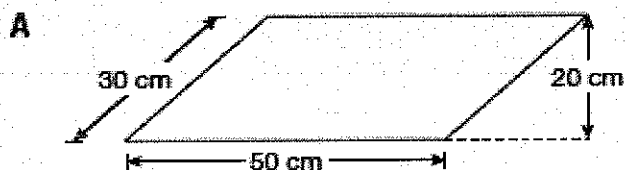
36 Four triangles are shown on the grid below.
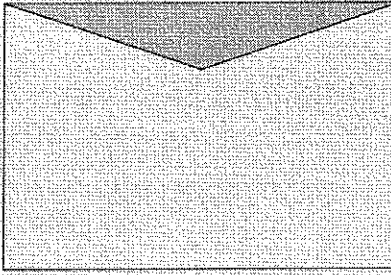
Triangle 1

Triangle 2

Triangle 3

Triangle 4

Which triangle has an area of 18 square units?

F   Triangle 1

G   Triangle 2

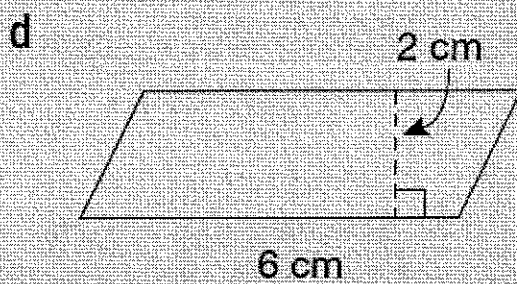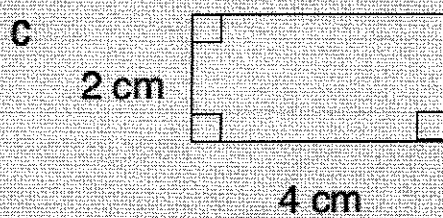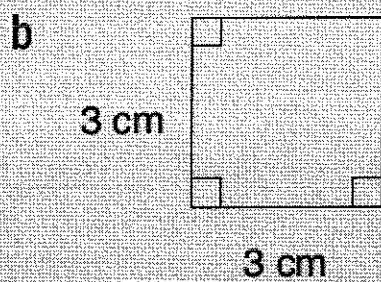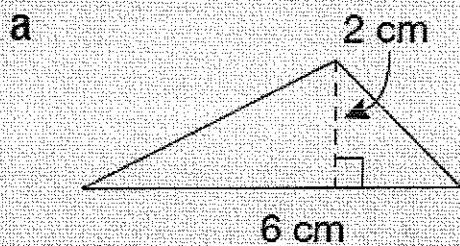H   Triangle 3

J   Triangle 4

Explain your thinking:

10 Determine the area of the unshaded part of the rectangle below. Use a ruler.

Justify your answer.

The area of the unshaded part of the rectangle is _____.

19 Which shape below has an area of 12 cm²?

a

2 cm

6 cm

b

3 cm

3 cm

c

2 cm

4 cm

d

2 cm

6 cm

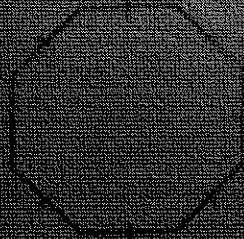# 6 – MEA – POST TEST (9 QUESTIONS). LEVEL: _____

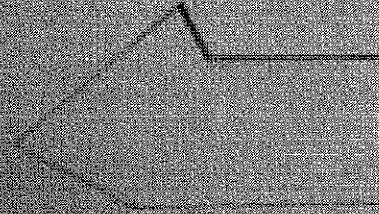| FIRST NAME, LAST NAME:	CLASS:

Part A

1. Measure to find the perimeter of each polygon. Give your answer in two different units.

   a)

   b)
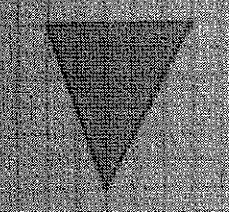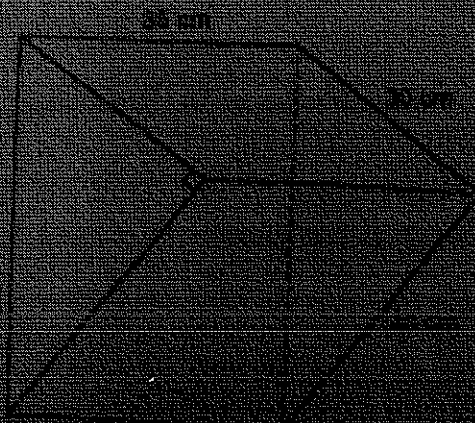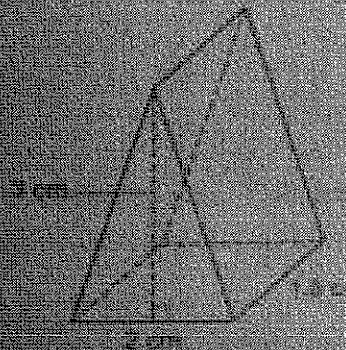
2. Find the area of each polygon.

   a)

   b)
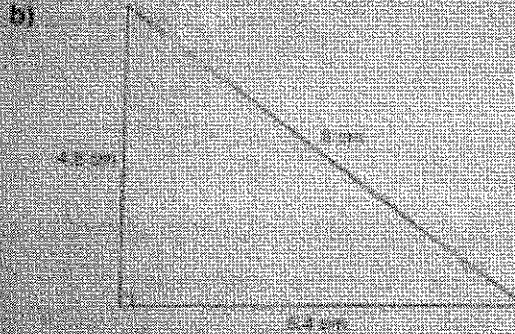
3. Find the volume of each triangular prism.

   a)

   b)

Master 8.15a   Unit Test continued

4. A triangular prism has length 6 cm.
    Find the surface area of the prism if it has each triangular face.
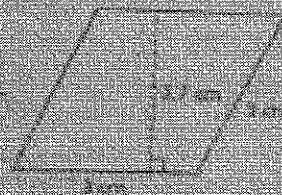
a)

b)

_____

_____

Part B

5. The perimeter of a square is 28 cm.
    a) What is the area of the square? How do you know?

_____

_____

    b) Suppose the side lengths of the square are tripled.
       Explain what happens to the perimeter and to the area.

_____

_____

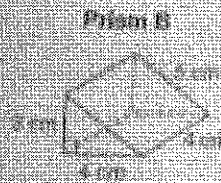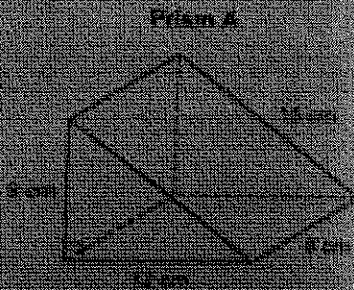6. Explain why the area of the parallelogram is *not* 9 cm².

7. A triangle has the same height
and area as this parallelogram.
What is the length of the base of the triangle?
How do you know?

8. Use a ruler and a compass. Draw each figure.
a) a triangle with perimeter 7 cm

b) a rectangle with perimeter 16 cm and area 7 cm²

Part C

9. a) Find the surface area and the volume of each prism.

Prism A

Prism B

b) How many of Prism B will fit inside Prism A?
How do you know?