Test - Perimeter, area and volume

Year: Year 7 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Area and perimeter

(a) Find the area of a triangle with base 14 cm and perpendicular height 9 cm. (1 mark)
(b) A rectangle has area 72 cm² and width 6 cm. Find its perimeter. (2 marks)
(c) Find the area of a trapezium with parallel sides 7 cm and 13 cm and height 5 cm. (1 mark)

Question 2 (4 marks)

Question 2 – Volume

A cuboid has length 9 cm, width 6 cm and height 5 cm.

a. Find its volume. (1 mark)
b. Find its surface area. (2 marks)
c. A second cuboid has the same volume and a base of 5 cm by 6 cm. Find its height. (1 mark)

Question 3 (4 marks)

Question 3 – Units

(a) Convert 2.5 m² to cm². (1 mark)
(b) Convert 3 500 cm³ to litres. (1 mark)
(c) A tank holds 0.4 m³. How many litres is this? (1 mark)
(d) How many cm² are there in 0.3 m²? (1 mark)

Question 4 (4 marks)

Question 4 – Problem: the school playground

A playground is a rectangle 40 m by 25 m. A rectangular sandpit 6 m by 4 m is built in one corner. The rest of the playground is to be covered with safety surface that costs £12 per m².

a. Work out the area of the playground. (1 mark)
b. Work out the area to be covered with the safety surface. (1 mark)
c. Work out the cost. (1 mark)
d. A fence is put round the whole playground at £8 per metre. Work out the cost. (1 mark)

Question 5 (4 marks)

Question 5 – Problem: the fish tank

A fish tank is a cuboid 80 cm long, 35 cm wide and 45 cm high. It is filled with water to 5 cm below the top.

a. Find the depth of the water. (1 mark)
b. Find the volume of the water in litres. (2 marks)
c. The family wants to use a bigger tank of volume 200 litres. By how many litres is it bigger than the full capacity of the first tank? (1 mark)