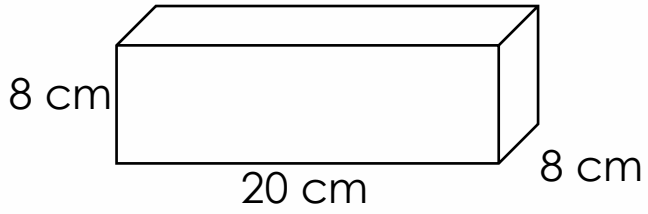
Read the exam style question carefully, then fill in each section below.

Question:

Lifeguards often use bricks to practice diving to the bottom of a swimming pool.

The dimensions of a typical diving brick are shown in the diagram.



When the brick is on the bottom of the swimming pool, the force acting on the top surface of the brick is due to the weight of the water is 480 N.

Gravitational field strength = 9.8 N/kg

Calculate the density of the water in the swimming pool. **(6)**

Section 1: At first glance

1. What **command words** are used in this question? Circle them clearly.

2. **Underline the key information** in the question above.

2. **How many marks** is this question worth?

Section 2: Thinking ahead

Read the question again.

What do you need to know in order to answer this question really well?

Can you split the question into two or more parts?
Are there any labelled diagrams that might help you to show your answer?

What are the key words that you should include in your answer?

Section 4: Space to plan

Use this space to plan your answer.

Section 4: Answer the question

Section 5: Mark Scheme

Point	Mark
A = 0.2 x 0.08 A = 0.016 (m^2)	1
$P = \frac{F}{A}$ $P = \frac{480}{0.016}$	1 Allow ecf from incorrectly calculated area
P = 30 000 (Pa)	1
$P = \rho gh$ $30\,000 = \rho \times 9.8 \times 3$	1 (substitution)
$\rho = \frac{30\,000}{(9.8 \times 3)}$	1 (rearranging/correct expression/working)
$\rho = 1020.41\ kg/m^3$	1 (answer)