



QUESTION
A rectangular box is shown in the two views above. The box is 10 units long, 5 units wide, and 3 units high. The lid is 1 unit thick. What is the surface area of the box?

ANSWER
The surface area of the box is 190 square units.

EXPLANATION
The surface area of a rectangular box is the sum of the areas of all six faces. The box is 10 units long, 5 units wide, and 3 units high. The lid is 1 unit thick.

The front face is a rectangle with a length of 10 units and a height of 3 units. The area of the front face is $10 \times 3 = 30$ square units. The back face is a rectangle with a length of 10 units and a height of 3 units. The area of the back face is $10 \times 3 = 30$ square units. The left side face is a rectangle with a width of 5 units and a height of 3 units. The area of the left side face is $5 \times 3 = 15$ square units. The right side face is a rectangle with a width of 5 units and a height of 3 units. The area of the right side face is $5 \times 3 = 15$ square units. The top face is a rectangle with a length of 10 units and a width of 5 units. The area of the top face is $10 \times 5 = 50$ square units. The bottom face is a rectangle with a length of 10 units and a width of 5 units. The area of the bottom face is $10 \times 5 = 50$ square units. The lid is a rectangle with a length of 10 units and a width of 5 units. The area of the lid is $10 \times 5 = 50$ square units.

The total surface area of the box is the sum of the areas of all six faces and the lid: $30 + 30 + 15 + 15 + 50 + 50 + 50 = 190$ square units.

© 2014



ANSWER
The surface area of the box is 190 square units.