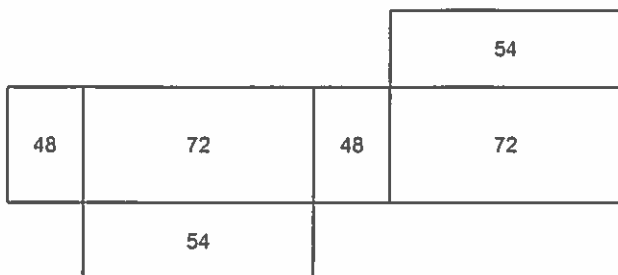


Surface Area of Rectangular Prisms

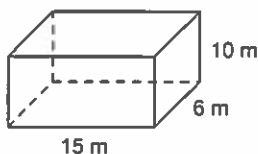
Multiple Choice

Identify the choice that best completes the statement or answers the question.

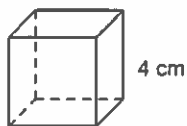
- _____ 1. The area of one face of a cube is 25 cm^2 . What is the surface area of the cube?
 a. 100 cm^2 b. 100150 cm^2 c. 30 cm^2 d. 125 cm^2
- _____ 2. This is the net of a right rectangular prism. The area of each face, in square centimetres, is given. What is the surface area of the prism?



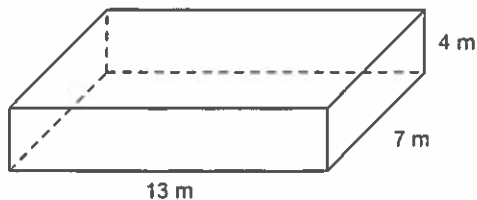
- a. 178 cm^2 b. 174 cm^2 c. 228 cm^2 d. 348178 cm^2
- _____ 3. Find the surface area of this right rectangular prism.



- a. 420 m^2 b. 300 m^2 c. 600 m^2 d. 480 m^2
- _____ 4. The length of one edge of this cube is 4 cm. What is the surface area of the cube?



- a. 96 cm^2 b. 32 cm^2 c. 64 cm^2 d. 24 cm^2
- _____ 5. The Drama Club plans to paint the outside walls of this box to be used as a second level to their stage. Find the surface area of the box.

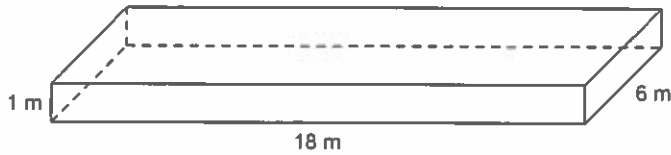


- a. 48 m^2 b. 342 m^2 c. 364 m^2 d. 171 m^2

Name: _____

ID: A

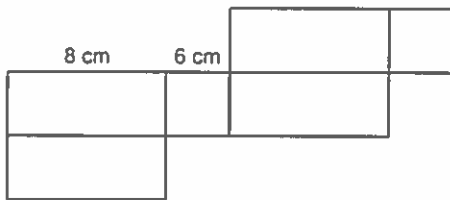
6. Find the surface area of this right rectangular prism.



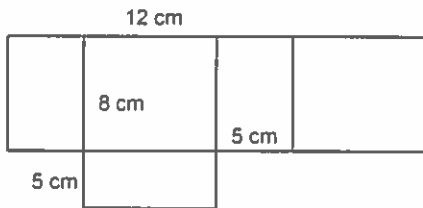
- a. 156 m^2 b. 48 m^2 c. 264 m^2 d. 132 m^2

Short Answer

7. This is the net of a right rectangular prism with square bases. What is the surface area of the prism?



8. An open box has the shape of a right rectangular prism. The net for the box is shown. Find the area of the material required to make the box.



9. This table shows the dimensions of 3 boxes.

| Object | Dimensions (cm) |
|-----------------|--------------------------|
| Pizza box | $36 \times 36 \times 6$ |
| Cereal box | $24 \times 17 \times 5$ |
| Box of tea bags | $26 \times 15 \times 10$ |

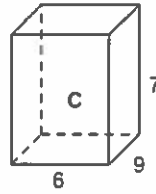
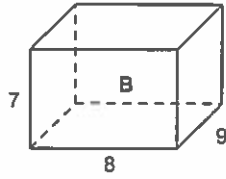
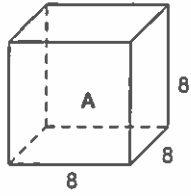
- a) What is the surface area of each box?
b) Which box has the least surface area?

Name: _____

ID: A

Problem

10. The diagrams shows the dimensions, in centimetres, of three right rectangular prisms. Which prism has the greatest surface area? Show your work.



Surface Area of Rectangular Prisms

Answer Section

MULTIPLE CHOICE

1. ANS: B PTS: 1 DIF: Easy
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
2. ANS: D PTS: 1 DIF: Easy
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
3. ANS: C PTS: 1 DIF: Moderate
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
4. ANS: A PTS: 1 DIF: Moderate
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
5. ANS: B PTS: 1 DIF: Moderate
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
6. ANS: C PTS: 1 DIF: Moderate
REF: 4.3 Surface Area of a Right Rectangular Prism LOC: 8.SS3
TOP: Shape and Space (Measurement) KEY: Conceptual Understanding

SHORT ANSWER

7. ANS:
264 cm²

PTS: 1 DIF: Moderate REF: 4.3 Surface Area of a Right Rectangular Prism
LOC: 8.SS3 TOP: Shape and Space (Measurement) KEY: Conceptual Understanding
8. ANS:
The area of the material required is 332 cm².

PTS: 1 DIF: Moderate REF: 4.3 Surface Area of a Right Rectangular Prism
LOC: 8.SS3 TOP: Shape and Space (Measurement)
KEY: Conceptual Understanding | Problem-solving Skills
9. ANS:
a) Pizza box: 3456 cm²
Cereal box: 1226 cm²
Box of tea bags: 1600 cm²
b) The cereal box has the least surface area.

PTS: 1 DIF: Moderate REF: 4.3 Surface Area of a Right Rectangular Prism
LOC: 8.SS3 TOP: Shape and Space (Measurement) KEY: Conceptual Understanding

PROBLEM

10. ANS:

Prism A: surface area = $(6 \times 8 \times 8) \text{ cm}^2 = 384 \text{ cm}^2$ Prism B: surface area = $2(8 \times 9 + 8 \times 7 + 9 \times 7) \text{ cm}^2 = 382 \text{ cm}^2$ Prism C: surface area = $2(6 \times 9 + 6 \times 7 + 9 \times 7) \text{ cm}^2 = 318 \text{ cm}^2$

Prism A has the greatest surface area.

PTS: 1

DIF: Difficult

REF: 4.3 Surface Area of a Right Rectangular Prism

LOC: 8.SS3

TOP: Shape and Space (Measurement)

KEY: Communication

