Name _____

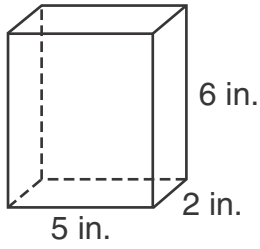
Intervention Lesson **N48**

Surface Area of Rectangular Prisms

Materials scissors, copy of nets for the square and rectangular prisms from *Teaching Tool Masters,* for each student

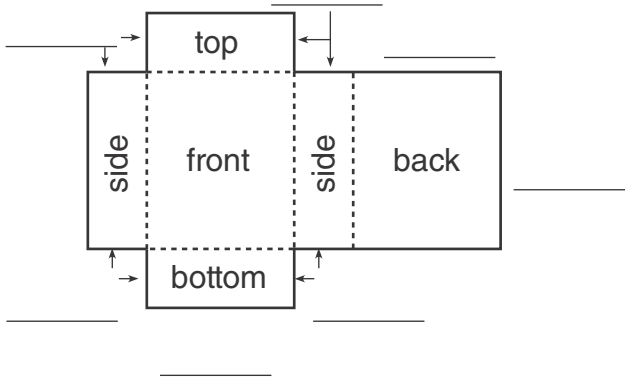
The surface area of a rectangular prism is the sum of the areas of all its faces.

How much wrapping paper does it take to cover the box shown at the right, not counting overlap?



Find the surface area of the prism by answering Exercises 1–7.

1. Cut out and fold the net for a rectangular prism. Use the folded prism to write the length of each edge on the net. Use lengths shown in the prism above. Unfold the net and use it to label the lengths of the edges on the net at the right.



2. What is the area of the top and bottom of the prism?

$5 \times 2 =$ _____ $in.^2$

3. What is the area of the side of the prism?

_____ $\times$ _____ = _____ $in.^2$

4. What is the area of the front and back of the prism?

_____ $\times$ _____ = _____ $in.^2$

5. Add the areas of all the faces to find the surface area.

side side front back top bottom

SA = _____ + _____ + _____ + _____ + _____ + _____ = _____

6. What is the surface area of the prism? _____ $in.^2$

7. How much wrapping paper does it take to cover the box? _____

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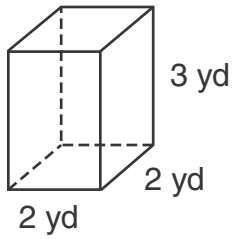
Surface Area of Rectangular Prisms (continued)

8. Cut out and fold the net for the square prism and use it to find the surface area of the prism at the right.

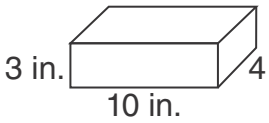


side ↓ side ↓ front ↓ back ↓ top ↓ bottom ↓

SA = _____ + _____ + _____ + _____ + _____ + _____ = _____ yd^2

Find the surface area of each figure.

9.



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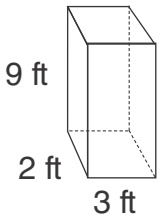

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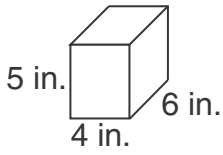

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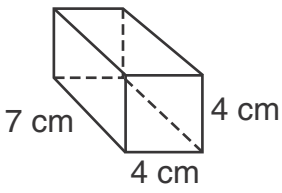

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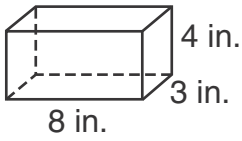

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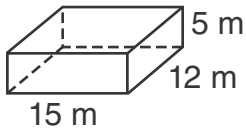

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15. What is the surface area of a rectangular prism that is 9 yards wide, 10 yards long, and 11 yards high?

_____

16. How much wood does it take to make a storage box that is 4 feet square on the bottom and 3 feet high, with a lid? Do not count overlap.

_____

17. **Reasoning** What is the surface area of the cube shown at the right? How could you find the surface area with out using addition?