Lesson 18: Determining Surface Area of Three-Dimensional Figures

Problem Set

Calculate the surface area of each figure below. Figures are not drawn to scale.

|  |  |
| --- | --- |
|  | $$15 in.$$$$7 in.$$$$15 in.$$ |

|  |  |
| --- | --- |
|  | $$18.7 cm$$$$2.3 cm$$$$8.4 cm$$ |

|  |  |
| --- | --- |
|  | $$2\frac{1}{3} ft.$$$$2\frac{1}{3} ft.$$$$2\frac{1}{3} ft.$$ |

|  |  |
| --- | --- |
|  | $$24.7 m$$$$32.3 m$$$$7.9 m$$ |

1. Write a numerical expression to show how to calculate the surface area of the rectangular prism. Explain each part of the expression.

$$3 ft.$$

$$7 ft.$$

$$12 ft.$$

1. When Louie was calculating the surface area for Problem 4, he identified the following:

length $=24.7 m$, width $=32.3 m$, and height $=7.9 m$.

However, when Rocko was calculating the surface area for the same problem, he identified the following:

length $=32.3 m$, width $=24.7 m$, and height $=7.9 m$.

Would Louie and Rocko get the same answer? Why or why not?

1. Examine the figure below.

$$7 m$$

$$7 m$$

$$7 m$$

* 1. What is the most specific name of the three-dimensional shape?
	2. Write two different expressions for the surface area.
	3. Explain how these two expressions are equivalent.