

## Volume of rectangular prisms (mixed units)

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### Grade 5 Word Problems Worksheet

1. Mariel has 3 pocket novels which measure 17 cm long, 12 cm wide and 3 cm high each. What is the volume of a stack of 10 identical pocket novels?
2. Jon bought a cabinet that has 6 identical drawers. Each drawer measures 15 inches long, 10 inches wide and 8 inches high. Two drawers were already full. What is the volume of space in the empty drawers in the cabinet?
3. Osmond entered his classroom which measures 20 m long, 15 m wide and 5 m high. How much space is there inside the classroom?



- Joel dug 18 ft deep down into the earth for a rectangular well that is 8 ft long and 10 ft wide. There was no water flowing at the bottom, so he dug down 3 more feet until the water flowed. How much soil was removed from the ground?
- Eileen brought her 2 lunch boxes to school. Her small lunch box is 14 cm long, 10 cm wide and 10 cm tall. The large lunch box is 6 cm longer, 2 cm wider and 1 cm taller than the small lunch box. What volume of food can Eileen put in the large lunch box?

## Answers

1.  $17 \times 12 \times 3 \times 10 = 6,120$   
The volume of a stack of 10 identical novel book is 6,120 cubic centimeters.
2.  $15 \times 10 \times 8 \times (6 - 2) = 1,200 \times 4 = 4,800$   
The volume of space in the empty drawers is 4,800 cubic inches.
3.  $20 \times 15 \times 5 = 1,500$   
There are 1,500 cubic meters of space inside the classroom.
4.  $8 \times 10 \times (18 + 3) = 8 \times 10 \times 21 = 1,680$   
1,680 cubic feet of soil was removed from the ground.
5.  $(14 + 6) \times (10 + 2) \times (10 + 1) = 20 \times 12 \times 11 = 2,640$   
The large lunch box can hold 2,640 cubic centimeters of food.