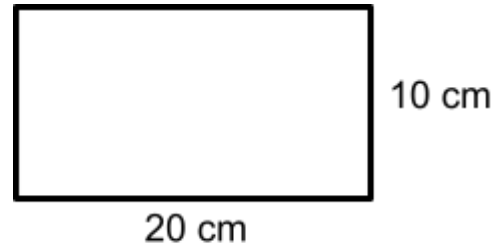
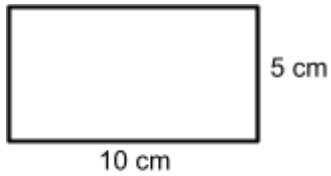


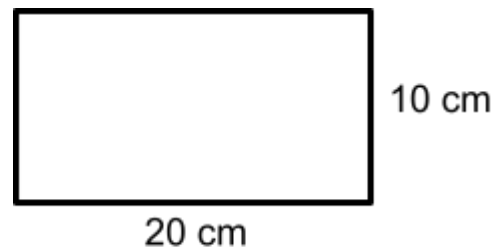
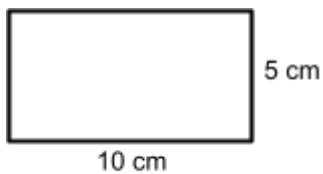
## Unit Conversion and Dimensional Effects

1. Calculate the **perimeter** of each shape here.



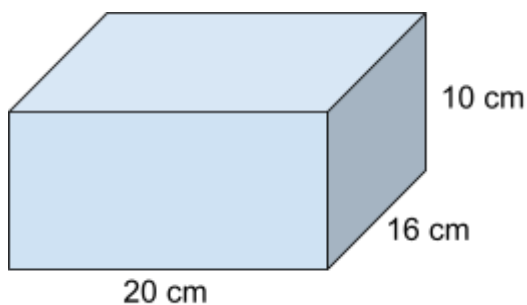
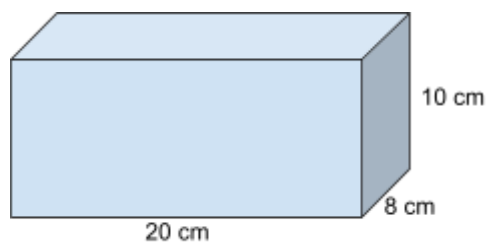
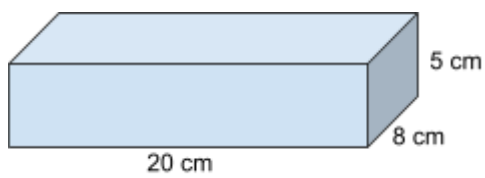
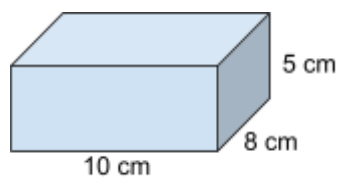
2. What happens to the **perimeter** when you double both side lengths of a rectangle?

3. Calculate the **area** of each shape here.



4. What happens to the **area** when you double both side lengths of a rectangle?

5. Calculate the **volume** of each shape here.



6. What happens to the **volume** when you double ONE side length of a rectangular prism?

Double

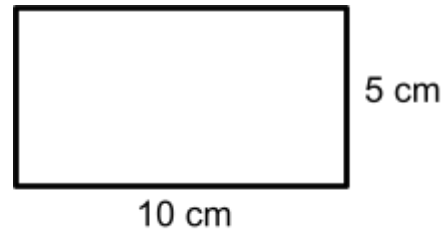
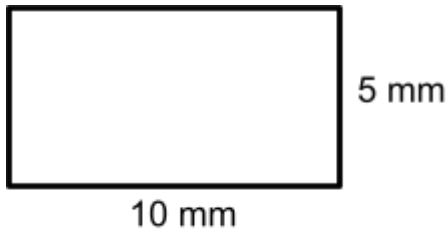
7. What happens to the **volume** when you double TWO side lengths of a rectangular prism?

Quadrupling

8. What happens to the **volume** when you double ALL THREE side lengths of a rectangular prism?

Octupling

9. Calculate the **area** of each shape here.
- Convert *mm* to *cm* first.
  - 10 mm = 1 cm



10. What happens to the **area** when both side lengths of a rectangle are multiplied by 10?
11. What happens to the **volume** of a rectangular prism if each side length is multiplied by 10?
12. The volume of a cone is  $V = \frac{1}{3}\pi r^2 h$
- What would be the effect of **doubling the radius**?
  - What would be the effect of **doubling the height**?
  - What would be the effect of **tripling the height AND halving the radius** at the same time?