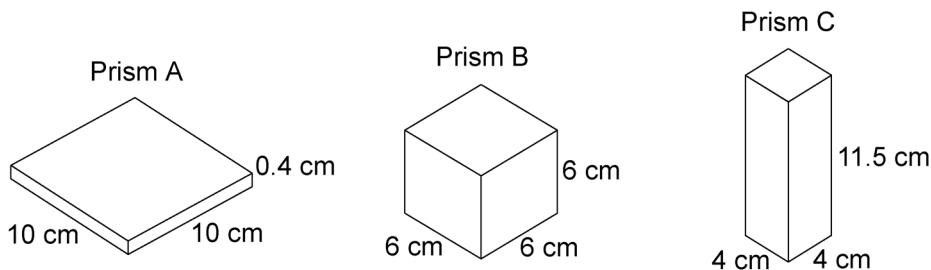


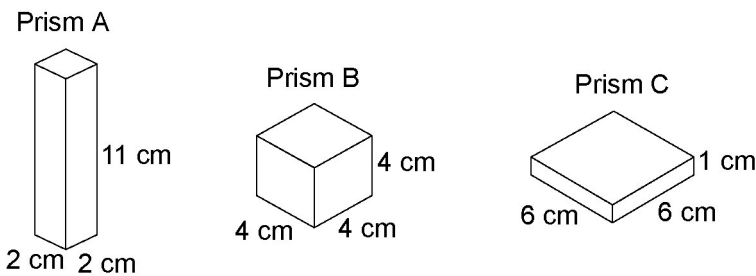
Practice: Maximize the Volume of a Square-Based Prism

For all questions, round your answer to the nearest tenth of a unit when necessary.

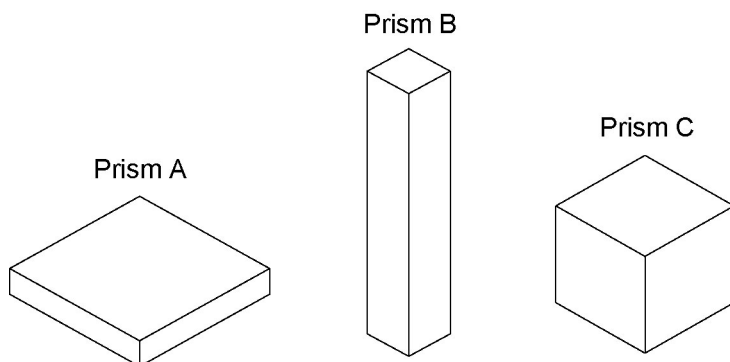
1. Each square-based prism has surface area 216 cm^2 .



- Find the volume of each prism.
 - Order the prisms from greatest to least volume.
2. Each square-based prism has surface area 96 cm^2 . Order the prisms from greatest to least volume.



3. Each square-based prism has the same surface area. Order the prisms from greatest to least volume.



4. Find the dimensions of the square-based prism with maximum volume, given each surface area.
- | | |
|------------------------|------------------------|
| a) 294 cm^2 | b) 486 cm^2 |
| c) 1176 cm^2 | d) 1350 cm^2 |
| e) 497 cm^2 | f) 662 cm^2 |