

Math 9 Accelerated - Exam Review: Chapter 1

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- Determine the value of $\sqrt{0.16}$.
 - 0.04
 - 0.4
 - 0.07
 - 0.2
- Determine the value of $\sqrt{2.56}$.
 - 0.64
 - 0.16
 - 0.8
 - 1.6
- Calculate the number whose square root is 8.1.
 - 0.9
 - 32.4
 - 65.61
 - 81
- Which fraction is a perfect square?
 - $\frac{49}{60}$
 - $\frac{49}{225}$
 - $\frac{28}{225}$
 - $\frac{7}{15}$
 - ii
 - iii
 - iv
 - i
- Which numbers are perfect squares?
 - 20.25
 - 32
 - 16.9
 - 3.24
 - i and ii
 - i and iii
 - i and iv
 - ii and iii
- Determine the value of $\sqrt{\frac{32}{50}}$.
 - $\frac{4}{10}$
 - $\frac{16}{25}$
 - $\frac{8}{5}$
 - $\frac{4}{5}$
- Name the two whole numbers whose squares are closest to 21.5.
 - 16, 25
 - 4, 5
 - 9, 25
 - 4, 9
- Which decimal has a square root between 13 and 14?
 - 210.3
 - 144
 - 13.5
 - 177.5
 - iv
 - i
 - iii
 - ii

9. Which fraction has a square root between 3 and 4?

i) $\frac{52}{3}$

ii) $\frac{61}{3}$

iii) $\frac{37}{4}$

iv) $\frac{79}{4}$

A iv

B ii

C iii

D i

10. Determine the value of $\sqrt{47.2}$, to the nearest tenth.

A 7

B 6.8

C 6.87

D 6.9

11. Estimate the value of $\sqrt{\frac{7}{12}}$, to the nearest tenth.

A 0.8

B 0.6

C 0.7

D 0.76

12. The lengths of the two legs of a right triangle are 6.5 cm and 3.4 cm.

Determine the length of the hypotenuse to 1 decimal place.

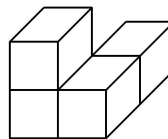
A 53.8 cm

B 7.3 cm

C 5.5 cm

D 3.1 cm

13. This composite object is made using centimetre cubes. Determine its surface area.



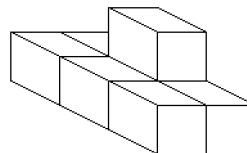
A 24 cm²

B 20 cm²

C 15 cm²

D 18 cm²

14. This object is made from 7 centimetre cubes. Determine its surface area.



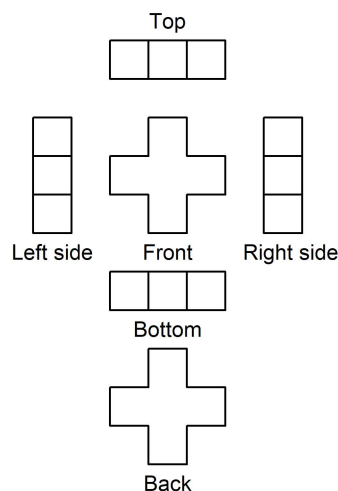
A 20 cm²

B 28 cm²

C 42 cm²

D 26 cm²

15. Here are the 6 views of an object made using centimetre cubes. Determine its surface area.



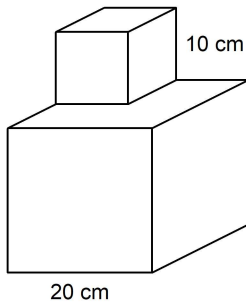
A 28 cm²

B 17 cm²

C 11 cm²

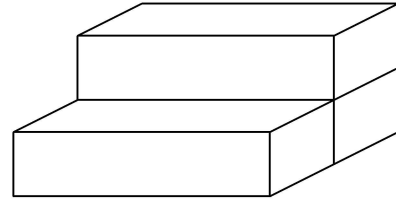
D 22 cm²

16. This composite object is made of a 10-cm cube on top of a 20-cm cube. Determine its surface area.



- A 2800 cm²
 B 2500 cm²
 C 2900 cm²
 D 3000 cm²

17. This object is made from 3 identical right rectangular prisms. Each prism is 65 cm long and has square ends of side length 20 cm. What is the surface area of the object?

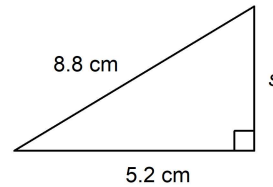


- A 11 600 cm²
 B 18 000 cm²
 C 10 200 cm²
 D 12 800 cm²

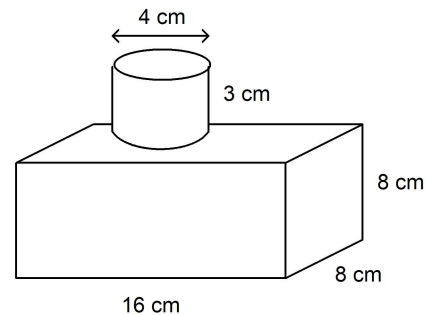
Short Answer

- Determine the value of $\sqrt{\frac{121}{169}}$.
- Calculate the number whose square root is $\frac{15}{16}$.
- Identify the decimals that are perfect squares.
16, 1.6, 0.16, 0.016, 0.0016
- Between which two whole numbers does $\sqrt{19.36}$ lie?
- A square garden has an area of 306.25 m².
 a) Determine the length of one side of the garden.
 b) Determine the perimeter of the garden.
- To estimate the value of $\sqrt{167.5}$, determine the two whole number perfect squares closest to 167.5 and their square roots.
- Name 2 decimals that have square roots between 2.4 and 2.5.

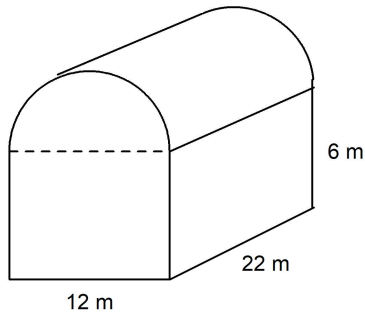
8. Determine the length of side s .



9. Determine the surface area of this composite object, to the nearest square centimetre. The cylinder has diameter 4 cm and height 3 cm. The prism has length 16 cm, width 8 cm, and height 8 cm.



10. A barn is built in the shape of a right rectangular prism with a semi-circular roof. Determine the surface area of the barn. Give your answer to the nearest whole number.

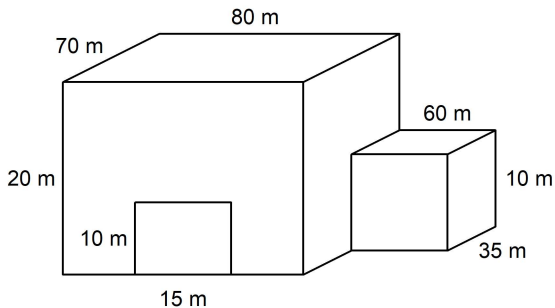


Problem

- Find 3 perfect squares that are greater than 0.37 but less than 0.61.
- Write these numbers in order from least to greatest. Justify your answer.

$$\sqrt{\frac{14.2}{3}}, \sqrt{\frac{13.1}{4}}, \sqrt{4.5}, \sqrt{3.7}$$

- A warehouse measures 80 m by 70 m by 20 m. It has an open door that measures 15 m by 10 m on the front. A store room that measures 60 m by 35 m by 10 m is attached to one wall of the warehouse. Determine the total surface area of the warehouse building. Show your calculations.



- Two identical equilateral triangular prisms are joined by a cylinder as shown. The equilateral triangle has side length 14 cm and the rectangular sides have length 5 cm. The cylinder has diameter 5 cm and length 9 cm. Determine the surface area of the composite object, to the nearest square centimetre. Show your work.

