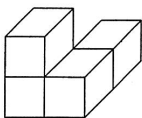


Name: \_\_\_\_\_ Class: \_\_\_\_\_ Date: \_\_\_\_\_

ID: A

**Chapter 1 Test Review****Multiple Choice***Identify the choice that best completes the statement or answers the question.*

- \_\_\_\_\_ 1. Determine the value of  $\sqrt{2.56}$ .  
a. 0.64                      b. 1.6                      c. 0.16                      d. 0.8
- \_\_\_\_\_ 2. Calculate the number whose square root is 8.1.  
a. 32.4                      b. 65.61                      c. 0.9                      d. 81
- \_\_\_\_\_ 3. Which decimal has a square root between 15 and 16?  
i) 272.3  
ii) 196  
iii) 15.5  
iv) 233.5  
a. iv                      b. i                      c. ii                      d. iii
- \_\_\_\_\_ 4. Which fraction has a square root between 3 and 4?  
i)  $\frac{61}{7}$   
ii)  $\frac{42}{5}$   
iii)  $\frac{53}{5}$   
iv)  $\frac{60}{7}$   
a. i                      b. iv                      c. ii                      d. iii
- \_\_\_\_\_ 5. Estimate the value of  $\sqrt{0.95}$ , to the nearest tenth.  
a. 0.9                      b. 0.97                      c. 1.0                      d. 0.3
- \_\_\_\_\_ 6. A square has an area of  $27.8 \text{ cm}^2$ .  
Determine the side length of the square, to the nearest millimetre.  
a. 5.27 cm                      b. 5 cm                      c. 5.2 cm                      d. 5.3 cm
- \_\_\_\_\_ 7. The lengths of the two legs of a right triangle are 6.5 cm and 3.2 cm.  
Determine the length of the hypotenuse to 1 decimal place.  
a. 3.1 cm                      b. 7.2 cm                      c. 5.7 cm                      d. 52.5 cm
- \_\_\_\_\_ 8. This composite object is made using centimetre cubes. Determine its surface area.

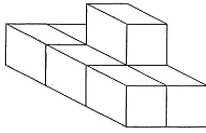


- a.  $24 \text{ cm}^2$                       b.  $20 \text{ cm}^2$                       c.  $15 \text{ cm}^2$                       d.  $18 \text{ cm}^2$

Name: \_\_\_\_\_

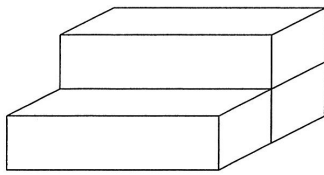
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9. This object is made from 7 centimetre cubes. Determine its surface area.



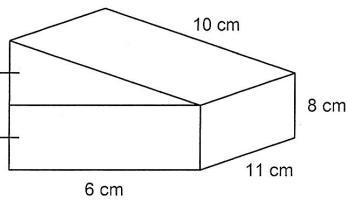
- a.  $20 \text{ cm}^2$       b.  $28 \text{ cm}^2$       c.  $42 \text{ cm}^2$       d.  $26 \text{ cm}^2$

10. 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?



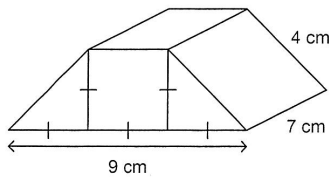
- a.  $10\,200 \text{ cm}^2$       b.  $18\,000 \text{ cm}^2$       c.  $12\,800 \text{ cm}^2$       d.  $11\,600 \text{ cm}^2$

11. This object is composed of a right triangular prism on top of a right rectangular prism. Determine the surface area of the object.



- a.  $342 \text{ cm}^2$       b.  $584 \text{ cm}^2$       c.  $728 \text{ cm}^2$       d.  $518 \text{ cm}^2$

12. This object is composed of two right triangular prisms and a right rectangular prism. Determine the surface area of the object.

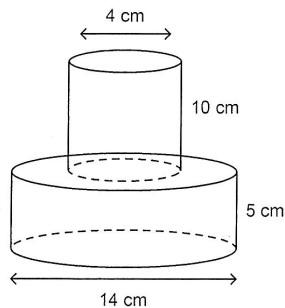


- a.  $176 \text{ cm}^2$       b.  $113 \text{ cm}^2$       c.  $158 \text{ cm}^2$       d.  $212 \text{ cm}^2$

Name: \_\_\_\_\_

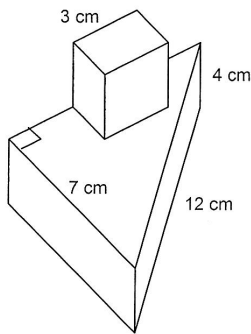
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13. This object is composed of a cylinder of diameter 4 cm and height 10 cm on top of another cylinder of diameter 14 cm and height 5 cm. Determine the surface area of the object, to the nearest square centimetre.



- a.  $500 \text{ cm}^2$       b.  $657 \text{ cm}^2$       c.  $661 \text{ cm}^2$       d.  $653 \text{ cm}^2$

14. A 3-cm cube is attached to the top of a right triangular prism as shown. Determine the surface area of the composite object, to the nearest square centimetre.



- a.  $219 \text{ cm}^2$       b.  $185 \text{ cm}^2$       c.  $228 \text{ cm}^2$       d.  $210 \text{ cm}^2$

15. Determine the value of  $\sqrt{0.25}$ .

- a. 0.05      b. 0.125      c. 0.5      d. 0.0625

16. Which numbers are perfect squares?

- i) 42.25  
ii) 32  
iii) 28.9  
iv) 3.24

- a. i and ii      b. i and iv      c. ii and iii      d. i and iii

17. Determine the value of  $\sqrt{\frac{50}{72}}$ .

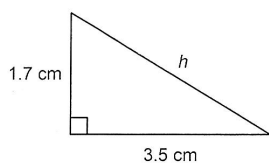
- a.  $\frac{5}{6}$       b.  $\frac{5}{12}$       c.  $\frac{25}{36}$       d.  $\frac{10}{6}$

Name: \_\_\_\_\_

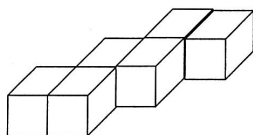
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## Short Answer

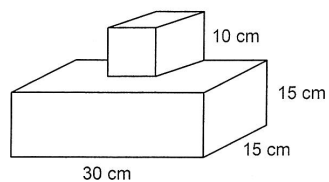
18. Determine the value of  $\sqrt{2.89}$ .
19. Determine the value of  $\sqrt{\frac{289}{361}}$ .
20. Determine the value of  $\sqrt{0.27}$ , to the nearest tenth.
21. Determine the length of the hypotenuse,  $h$ .



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



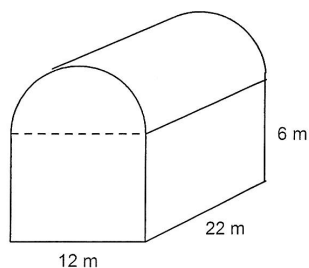
23. This object is composed of a cube on top of a right rectangular prism. Determine the surface area of the object.



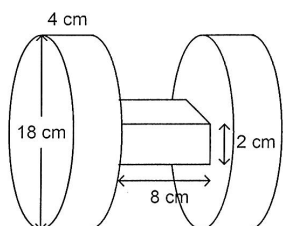
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24. A barn is built in the shape of a right rectangular prism with a semi-circular roof. Determine the surface area of the barn. Give your answer to the nearest whole number.



25. This object is composed of two identical cylinders connected by a right rectangular prism. Each cylinder has diameter 18 cm and height 4 cm. The rectangular prism has length 8 cm and square ends of side length 2 cm. Determine the surface area of the object. Give your answer to the nearest whole number.



**Problem**

26. Determine the value of  $\sqrt{\frac{\sqrt{81} + \sqrt{49}}{\sqrt{196} - \sqrt{100}}}$ .

## Chapter 1 Practice Test (Answers)

Multiple Choice

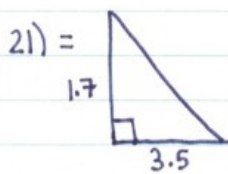
- |      |       |       |
|------|-------|-------|
| 1) B | 7) B  | 13) D |
| 2) B | 8) D  | 14) A |
| 3) A | 9) D  | 15) C |
| 4) D | 10) C | 16) B |
| 5) C | 11) B | 17) A |
| 6) D | 12) A |       |

Short Answer

18)  $\sqrt{2.89} = 1.7$

19)  $\frac{\sqrt{289}}{\sqrt{361}} = \frac{17}{19}$

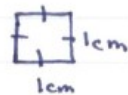
20)  $\sqrt{0.25} = 0.5$



$$\begin{aligned}c^2 &= a^2 + b^2 \\c^2 &= 1.7^2 + 3.5^2 \\c^2 &= 2.89 + 12.25 \\c^2 &= 15.14 \\\sqrt{c^2} &= \sqrt{15.14} \\c &= 3.9 \text{ cm}\end{aligned}$$

Short Answer

$$\begin{aligned}
 22) \quad & 6 \text{ cubes} \times 6 \text{ faces} \\
 & = 36 \text{ faces} - 10 \text{ Over lap faces} \\
 & = 26 \text{ faces} \\
 & \quad \times 1 \text{ cm}^2 \\
 & \quad \hline
 & \quad 26 \text{ cm}^2
 \end{aligned}$$



$$A = 1 \times 1$$

$$A = 1 \text{ cm}^2$$

$$\begin{aligned}
 23) \quad & \text{Cube} \\
 & SA = 6 \times b^2 \\
 & SA = 6 \times 10^2 \\
 & SA = 6 \times 100 \\
 & SA_1 = 600 \text{ cm}^2
 \end{aligned}$$

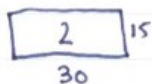
Over lap



$$A = 2(10 \times 10)$$

$$= 200$$

Rectangular prism (30, 15, 15)

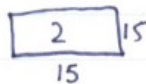


$$A = b \times h$$

$$A = 30 \times 15$$

$$A = 450$$

$$2A = 900$$

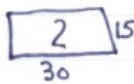


$$A = b \times h$$

$$A = 15 \times 15$$

$$A = 225$$

$$A = 450$$



$$A = 900$$

$$SA_2 = 900 + 450 + 900$$

$$SA_2 = 2250$$

$$TSA = SA_1 + SA_2 - \text{Over lap}$$

$$= 600 + 2250 - 200$$

$$= 2650 \text{ cm}^2$$

Short Answer

24) Rectangular Prism (12, 22, 6)

$$\begin{array}{|c|} \hline 1 \\ \hline \end{array} \begin{array}{|c|} \hline 22 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline 2 \\ \hline \end{array} \begin{array}{|c|} \hline 6 \\ \hline \end{array}$$

$$\begin{array}{|c|} \hline 2 \\ \hline \end{array} \begin{array}{|c|} \hline 22 \\ \hline \end{array}$$

$A = b \times h$

$A = b \times h$

$A = b \times h$

$A = 12 \times 22$

$A = 12 \times 6$

$A = 6 \times 22$

$A = 264$

$A = 72$

$A = 132$

$2A = 144 \text{ m}^2$

$2A = 264 \text{ m}^2$

$$\begin{aligned} SA_1 &= 264 + 144 + 264 \\ &= 672 \text{ m}^2 \end{aligned}$$

Cylinder Half Cylinder

$SA = \pi r^2 + \pi r h$

$= (3.14)(6)^2 + (3.14)(6)(22)$

$= 113.1 + 414.7$

$SA_2 = 527.78$

$TS_A = SA_1 + SA_2 - \text{overlap}$

$= 672 + 527.78 - (12 \times 22)$

$= 672 + 527.78 - 264$

$= 935.78 \text{ m}^2$



Short Answer25) Cylinder :  $r = 9$   $h = 4$ 

$$SA = 2\pi r^2 + 2\pi rh$$

$$= 2(3.14)(9)^2 + 2(3.14)(9)(4)$$

$$= 508.9 + 226.2$$

$$SA_1 = 735.13 \text{ cm}^2$$

$$\text{Cylinder 2} : SA_2 = 735.13 \text{ cm}^2$$

Rectangular Prism :  $(8, 2, 2)$ 

$$\frac{2}{8}^2$$

$$\frac{2}{8}^2$$

$$\frac{2}{2}^2$$

$$A = b \times h$$

$$A = b \times h$$

$$A = b \times h$$

$$A = 8 \times 2$$

$$A = 8 \times 2$$

$$A = 2 \times 2$$

$$A = 16$$

$$A = 16$$

$$A = 4$$

$$2A = 32$$

$$2A = 32$$

$$2A = 8$$

$$SA_3 = 32 + 32 + 8$$

$$SA_3 = 72 \text{ cm}^2$$

$$TSA = SA_1 + SA_2 + SA_3 - \text{overlap} - \text{overlap}$$

$$= 735.13 + 735.13 + 72 - 8 - 8$$

$$TSA = 1526.3 \text{ cm}^2$$

Short Answer

$$26) \sqrt{\frac{\sqrt{81} + \sqrt{49}}{\sqrt{196} - \sqrt{100}}} = \sqrt{\frac{9 + 7}{14 - 10}}$$

$$= \sqrt{\frac{16}{4}}$$

$$= \sqrt{4}$$

$$= 2$$