

QUIZ: Chapter 1

Short Answer

1. Convert 24 yd. to feet.

$$24 \text{ yd} \times 3 \frac{\text{ft}}{\text{yd}} = 72 \text{ ft}$$

2. Convert 7 yd. to inches.

$$7 \text{ yd} \times 3 \frac{\text{ft}}{\text{yd}} = 21 \text{ ft}, \quad 21 \text{ ft} \times 12 \frac{\text{in}}{\text{ft}} = 252 \text{ in.}$$

3. Convert 12,565 ft. to miles, yards, and feet.

$$12565 \text{ ft} \div 5280 \frac{\text{ft}}{\text{mi}} = 2 \text{ mile } 2005 \text{ ft}$$

2 miles 668 yd 1 ft.

4. Nancy has 7 yd. of material. She wants to make curtains that are 18 in. wide. How many curtains can Nancy make?

$$18 \text{ in} = 1.5 \text{ ft} \quad 21 \div 1.5 = 14$$

$$7 \text{ yd} = 21 \text{ ft}$$

5. Paul plans to replace 487 in. of wood railing along the top of his patio fence. The wood is sold in 8-ft. lengths. How many 8-ft. lengths does Paul need to purchase?

$$487 \text{ in} \div 12 \frac{\text{in}}{\text{ft}} = 40.583 \text{ ft}$$

$$40.583 \text{ ft} \div 8 \text{ ft} = 5.07$$

6 - 8ft lengths

6. An indoor lacrosse goal is 4 ft. high. What is this measurement to the nearest tenth of a metre?

$$4 \text{ ft} \times 12 \frac{\text{in}}{\text{ft}} = 48 \text{ in}$$

$$48 \text{ in} \times 2.54 \frac{\text{cm}}{\text{in}} = 121.92 \text{ cm} = 1.2 \text{ m}$$

7. Convert 165 cm to feet and the nearest inch.

$$165 \text{ cm} \div 2.54 \frac{\text{cm}}{\text{in}} = 64.96 \text{ in}$$

$$64.96 \text{ in} \div 12 \frac{\text{in}}{\text{ft}} = 5.41 \text{ ft}$$

8. Quentin is 5 ft. 1 in. tall. What is his height to the nearest centimetre?

$$5 \text{ ft} \times 12 \frac{\text{in}}{\text{ft}} = 60 \text{ in}$$

$$61 \text{ in} \times 2.54 \frac{\text{cm}}{\text{in}} = 154.94 \text{ cm}$$

$$41 \text{ ft} \times 12 \frac{\text{in}}{\text{ft}} = 4.96 \text{ in}$$

9. A figure skating blade is 0.15 in. wide. What is this width to the nearest millimetre?

$$0.15 \text{ in} \times 2.54 \frac{\text{cm}}{\text{in}} = 0.381 \text{ cm}$$

3.81 mm

5 ft 5 in

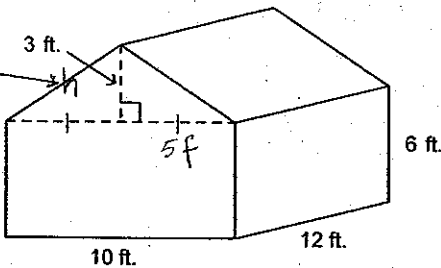
10. A garden shed is a composite object formed by a right rectangular prism with a right triangular prism as its roof. Determine the surface area of the garden shed to the nearest square foot.

$$3^2 + 5^2 = h^2$$

$$9 + 25 = h^2$$

$$34 = h^2$$

$$\sqrt{34} = h$$

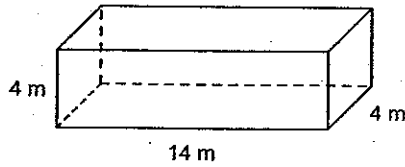


$$\text{Area} = 2(12 \text{ ft})(6 \text{ ft}) + 2(10 \text{ ft})(6 \text{ ft}) + 2(12 \text{ ft})(\sqrt{34}) + 2\left(\frac{1}{2}\right)(10)(3)$$

$$= 144 + 120 + 140 + 30$$

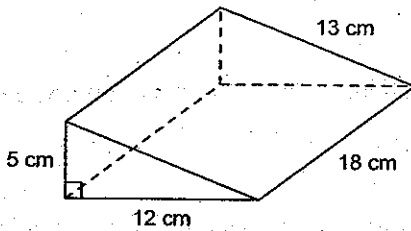
434 ft²

11. Find the surface area of this right rectangular prism.



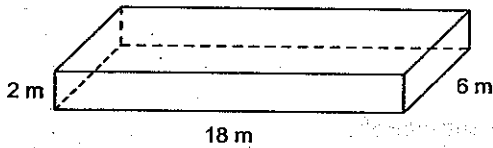
$$\begin{aligned}
 SA &= 2(14)(4) + 2(4)(4) + 2(14)(4) \\
 &= 112 + 32 + 112 \\
 &= 256 \text{ m}^2
 \end{aligned}$$

12. Calculate the surface area of this right triangular prism.



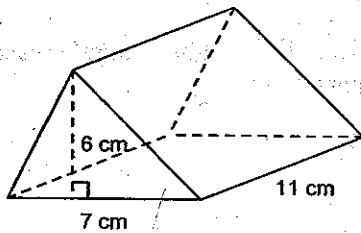
$$\begin{aligned}
 SA &= (18)(13) + (5)(18) + 2\left(\frac{1}{2}\right)(5)(12) + (18)(12) \\
 &= 234 + 90 + 60 + 216 \\
 &= 600 \text{ cm}^2
 \end{aligned}$$

13. Find the volume of this right rectangular prism.



$$\begin{aligned}
 V &= (2)(18)(6) \\
 &= 216 \text{ m}^3
 \end{aligned}$$

14. Calculate the volume of this right triangular prism.



$$\begin{aligned}
 V &= \frac{1}{2}(6)(7)(11) \\
 &= 231 \text{ cm}^3
 \end{aligned}$$