

10 **Part I: Multiple Choice. Place the correct answer in the corresponding blank at the end of this section.**

1. Which is a good referent for 1 inch?
 - (A) distance from a lightswitch to the floor
 - (B) distance from the tip of your thumb to the knuckle
 - (C) thickness of a dime
 - (D) width of your foot

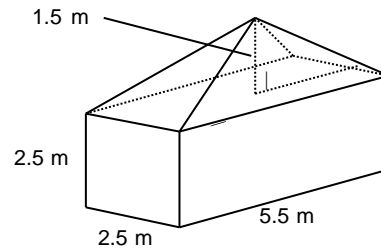
2. Convert 10 km to the nearest mile?
 - (A) 2
 - (B) 6
 - (C) 11
 - (D) 16

3. Elijah has 25 yd. of material that he will cut into strips that must be exactly 18 in. wide. How many strips can Elijah make?
 - (A) 4
 - (B) 16
 - (C) 50
 - (D) 138

4. The radius of a golf ball is approximately 20 mm. Determine the surface area of a golf ball to the nearest square mm.
 - (A) 3768 mm^2
 - (B) 5024 mm^2
 - (C) 33493 mm^2
 - (D) 100480 mm^2

5. Determine the volume of this composite object, which is a right square prism and a right rectangular pyramid, to the nearest tenth of a cubic metre.

- (A) 18.4 m^3
- (B) 37.4 m^3
- (C) 41.3 m^3
- (D) 54.9 m^3

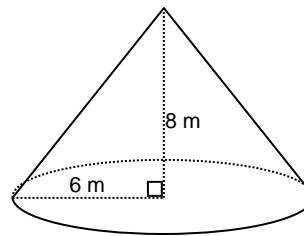


6. A square based prism has a volume of 45 ft^3 . What is the volume of a square based pyramid with the same base and height?

- (A) 11 ft^3
- (B) 15 ft^3
- (C) 135 ft^3
- (D) 180 ft^3

7. Determine the surface area of this right cone to the nearest square metre.

- (A) 123 m^2
- (B) 223 m^2
- (C) 264 m^2
- (D) 301 m^2



8. A sphere has a surface area of 10.1 m^2 . What is the diameter of the sphere to the nearest tenth of a metre?

- (A) 1.8 m
- (B) 3.6 m
- (C) 7.4 m
- (D) 9.6 m

9. A ball has a radius of 15 cm. What is the volume of the smallest cubical box that will hold the ball?
- (A) 422 cm^3
(B) 900 cm^3
(C) 3375 cm^3
(D) 27000 cm^3
10. A water tank is in the shape of a right circular cylinder with a height of 15 m and a diameter of 8 m. How many square meters of sheet metal was used in its construction?
- (A) 477 m^2
(B) 754 m^2
(C) 1156 m^2
(D) 3014 m^2

Answers to multiple choice.

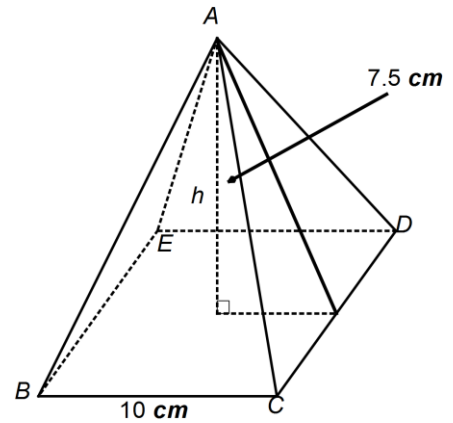
- 1.____ 2.____ 3.____ 4.____ 5.____
- 6.____ 7.____ 8.____ 9.____ 10.____

20 **Part II: Constructed Response. Answer each question in the space provided. Show all workings.**

- 3 11. Convert 777 inches to yards, feet, and inches.

3 12. A right square pyramid has side length 10 cm and height 7.5 cm.

(A) What is the surface area of the pyramid to the nearest cm^2 .

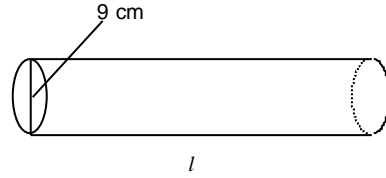


3 (B) Calculate the volume of the pyramid to the nearest cm^3 .

1 (C) What would be the volume of a rectangular prism with the same base area and height?

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13. The volume of a length of cylindrical cable is 1250 cm^3 . Calculate the length of the cable, l , to the nearest centimetre.



3

14. A spherical scoop of ice cream, as shown, melts into a cone. The sphere had a radius of 4 cm. The cone has a radius of 4 cm and a height of 15 cm. Will the melted ice cream fit into the cone or will it overflow the cone?



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15. Determine the surface area of this composite object, which is a right cylinder and two right cones, to the nearest square centimetre.

