Math 10. Measurement Practice Test Name_____ Block____

1. Draw a net to be used for finding the surface area of a rectangular prism.

2. Draw a net to be used for finding the surface area of a rectangular pyramid.

3. If the surface area of a cylinder is $400m^2$, what would be the surface area of a cylinder that is tripled in size?

4. If the surface area of a cylinder is $400m^2$, what would be the surface area of the cylinder in square centimetres?

Conversions:

a) 2.2 m = _____ mm
b) 135 ft = _____ in
c) 12500 lb = _____ tons
d) 3.75 lb = _____ oz
e) 168 g = _____ kg (3 decimals)
f) 212 in = _____ yd (2 decimals)

Conversions: (nearest tenth)

a) 175 in = _____ m
b) 13 mi = _____ m
c) 126 oz = _____ kg
d) 4.3 km = _____ in

5. Estimate the volume of air in this room. Show how you arrived at this value. Include units.

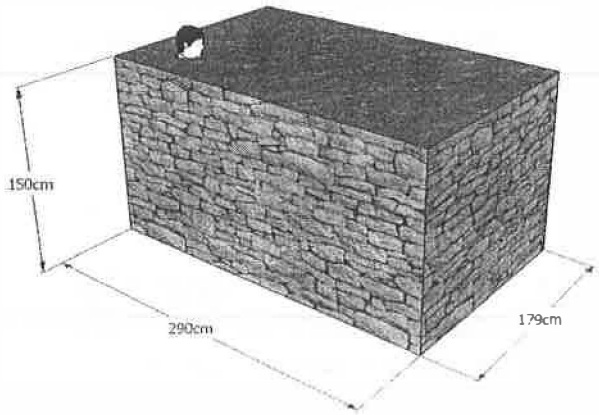
6. Find the radius of a sphere that has a volume of 2304π.

7. Find the radius of a hemisphere that has a surface area of 588π.

8. A volleyball has a circumference of 26 inches. What is the volume of the smallest cube that will hold this ball? (Nearest whole unit)

9. A cylinder has a surface area of 503 cm^2. If the height is four times greater than the radius, what is the height of the cylinder? (Nearest tenth)

Hint: Let radius = x.

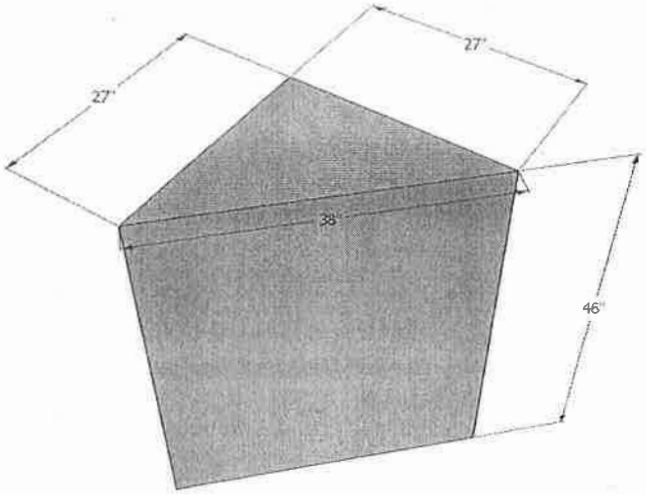


10. Calculate the surface area of stone required to cover the pool (excluding bottom). Nearest 100 square cm.

11. Calculate the volume of water required to fill the pool to the nearest 1000 cm^3.

12. Water has a mass of 1 gram per cm^3, or millilitre. What is the mass, in kilograms, of the water in the pool? In tonnes?

13. What is the volume in cubic metres. Answer to the nearest tenth.

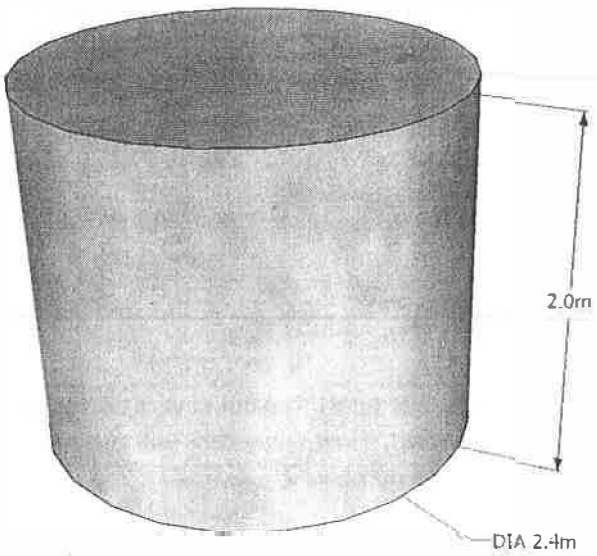


14. If you need to paint the shape to the left, what is the total area, in square inches, to be painted? (excluding the bottom)

15. One quart to paint covers 88 square feet. How many cans will you need to purchase?

16. Find the volume of the triangular prism to the nearest 100 in^3.

17. If the prism is reduced by a factor of $\frac{1}{3}$, what would be the approximate volume to the nearest 100 in^3.



18. Find the surface area of the cylinder to the left. Nearest tenth of a square metre.

19. Find the volume of the cylinder to the left. Nearest tenth of a cubic metre.

Multiple Choice Section:

5. 4 yd. is equivalent to:
   - **A.** 144″
   - **B.** 16 ft.
   - **C.** 0.05 mi.
   - **D.** 320 cm

6. 12000 ft. is equivalent to:
   - **A.** 120000″
   - **B.** 368000 cm
   - **C.** 4200 yd.
   - **D.** 2.27 mi.

7. 3 mi. is equivalent to:
   - **A.** 4600 m
   - **B.** 5400 yd.
   - **C.** 4.83 km
   - **D.** 15600 ft.

8. 12 m is equivalent to:

   A. 0.12 km

   B. 11 yd.

   C. 19308 mi.

   D. 472.44″

9. 400 m is equivalent to:

   A. 0.25 mi.

   B. 0.04 km

   C. 400 yd

   D. 4000″

10. Five students measure their height using different units. Andrew is 176 cm, Brittney is 5'4", Calvin is 1.8 yards, Don is 54 inches, and Elisha is 1.6 metres. From shortest to tallest, the order of the students is:

    A. Don, Andrew, Brittney, Calvin, Elisha

    B. Don, Elisha, Brittney, Calvin, Andrew

    C. Brittney, Elisha, Calvin, Don, Andrew

    D. Calvin, Andrew, Don, Brittney, Elisha

11. A homeowner is laying sod in her lawn. The lawn is a rectangle with dimensions of 28' × 18'. If one piece of sod is a rectangle with dimensions of 60 cm × 40 cm, approximately how many pieces of sod should the homeowner order?

    A. 195

    B. 245

    C. 295

    D. 345

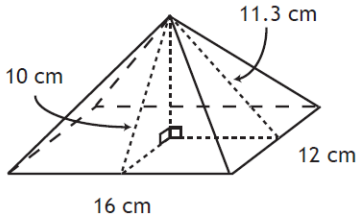
12. The surface area of the rectangular pyramid is:

    A. 478 cm^2

    B. 483 cm^2

    C. 488 cm^2

    D. 493 cm^2



13. The slant height of the cone is:

    A. 11 m

    B. 12 m

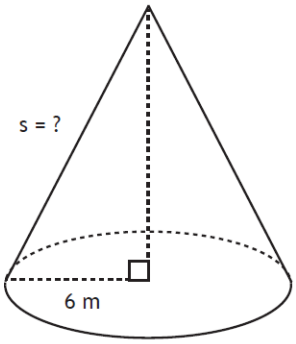
    C. 13 m

    D. 14 m

Cone Data

SA = 320.44 m^2

V = 347.57 m^3



14. A square pyramid has a base measuring 5 ft. by 5 ft. The height of the pyramid, from the centre of the base to the apex is 7 ft. Calculate the surface area of the pyramid.

A. 99 ft^2

B. 104 ft^2

C. 109 ft^2

D. 114 ft^2

15. A cylindrical water tank with an open top has a volume of 5702 m^3 and a radius of 11 m. Calculate the height of the tank.

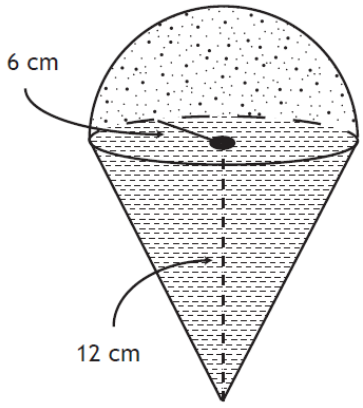
A. 14 m

B. 15 m

C. 16 m

D. 17 m

16. The volume of the 3-D object shown is:



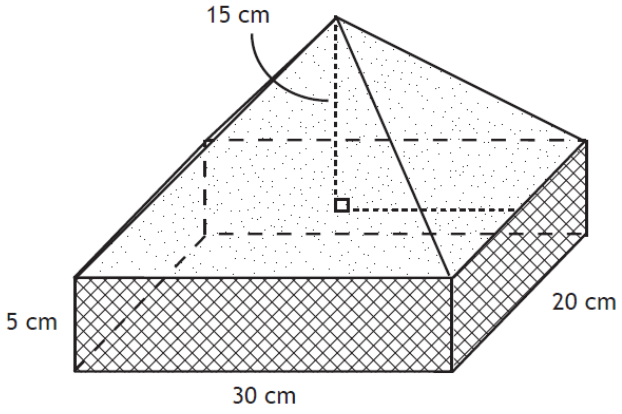
A. 905 cm^3

B. 910 cm^3

C. 915 cm^3

D. 920 cm^3

17. The surface area of the 3-D object shown is:



A. 2060 cm^2

B. 2065 cm^2

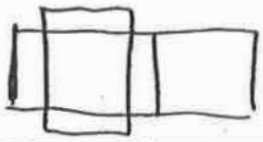
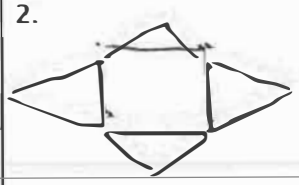
C. 2070 cm^2

D. 2075 cm^2

Math 10. Measurement Practice test

Name_____Block____

Answer Key

1. 	2. 	3. 3600 m^2
4. 4 000 000 cm^2	2200 mm 1620 in 6.25 tons 60 oz 0.168 kg 5.89 yd	4.4 m 20917 m 3.6 kg 169327.5 in OR 169291.3
5. ~~9000~~ 9100 cubic feet / 270 m^3	6. 12 units	7. 14 units
8. 567 in^3	9. 16 cm → 7.787 tonnes	10. 140 700 cm^2 / 21 800 in^2
11. 7 787 000 cm^3	12. 7787 kg	13. 7.8 m^3
14. 4597 square inches	15. Purchase 1 can (31.9 ft^2) to cover)	16. 16800 in^3
17. 600 in^3	18. 24.1 m^2	19. 9.0 m^3

Measurement - ANSWER KEY

5. A
6. D
7. C
8. D
9. A
10. B
11. A
12. C
13. A
14. A
15. B
16. A
17. B
18. B
19. B
20. D
21. A
22. D
23. A
24. C
25. A
26. C
27. B