Math 10 GMF – Measurement Exam Review

Show work on looseleaf. Transfer answers to the provided space **Name:_____**

1. Provide the area, in square feet, of a rectangular room that has a length of 6.2 m and a width that is 2 m less than the length? _____

2. Joan hiked a total of 4.6 kilometres on a walking trail. How many feet is that? _____

3. The typical way to represent a length of 136 inches in is to state it as _____ feet _____ inches.

4. A carpenter determines that he needs a total of 52 ' 9 13/16 " of baseboard trim to finish a room. The hardware store where he buys all of his material only sells it by the full metre. How many metres of baseboard will he need to buy to finish the room? _____

5. The bark on a 16-foot log with a diameter of 20 inches needs to be removed before the log is used in the construction of a log home. What is the area of bark that will be removed? (to the nearest in^2) _____

6. A square-based pyramid has a base length of 10 feet, a height of 49 inches and a slant length of 5 yards. What is the surface area(in m^2), including the base? _____

7. Joan fills a 24 L bucket with a container that holds 6 pints (US). How many times will she have to fill up the container in order to fill up the bucket? _____

8. A circular backyard sandbox has a circumference of 12 yards. It is uniformly filled with sand that is 5 inches deep. What is the volume of sand used, in yd^3? _____

9. The temperature outdoors on a hot summer day is 95^oF and the humidity makes it feel 14^oF warmer. What temperature does it feel like in degrees Celsius? _____

10. A pot of water is being boiled at a high altitude and has reached a temperature of 194^oF. If the boiling point of water at this altitude is 105^oC, then how many more degrees Fahrenheit must the water heat up? _____

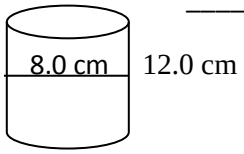
11. Steven bought 1 pound 4 ounces of washers and 2 pounds 14 ounces of bolts. What is the preferred way to represent the combined weight of his purchases? _____

12. 24 ounces of strawberry jam are being sold for $6.46. What is the cost/lb of strawberry jam? _____

13. Jennifer spent $23.15 on salt being sold for $0.32/lb. How many kilograms of salt did she buy? _____

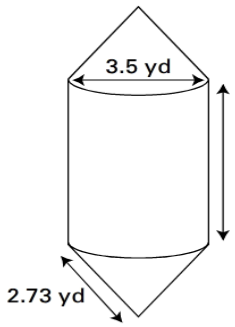
14. A paper label that is 42 cm long just fits around a cylindrical can. What is the radius, in inches, of the can (rounded to the nearest tenth)? _____

15. What is the side length (to the nearest tenth of a cm) of a cube that has the same volume as the cylinder shown below? _____



16. A rectangular garden measures 16 m by 10 m. In order to grow well, vegetables need about 0.6 yd^2 of space each. How many plants can you expect to grow in this garden? _____

17. The object shown below is a cylinder with conical ends. If the height of the cylindrical portion is 5.5 m, then determine the surface area (in yd^2) and volume (in yd^3) of the object, rounded to the nearest tenth.

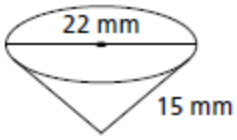


18.

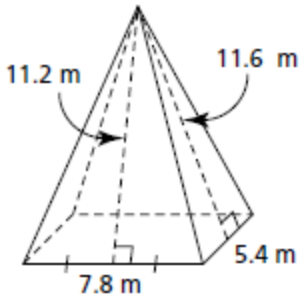
An ice-cream cone is to be coated with chocolate on the inside. The cone has an interior diameter of 7.5 cm and an interior height of 10.0 cm. What is the area to be coated? Write the answer to the nearest tenth of a square unit.

19. Find the surface area and volume of each.

c) right cone

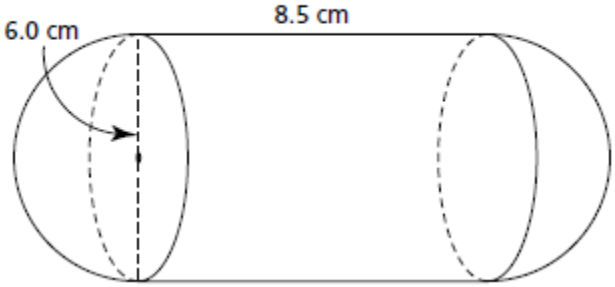


d) right rectangular pyramid



20. Determine the surface area and volume.

a) right cylinder and hemispheres



21.

A fitness ball is delivered in a flat package with a hand pump. The pump inflates the ball at a rate of 280 cm^3 per pump, to a diameter of 28 cm. How many pumps are needed to inflate the ball? Justify your answer.

22.

A pail of cookie dough is cylindrical, with diameter 17 cm and height 13 cm. A scoop makes a sphere of cookie dough with diameter 5 cm. How many cookies can be made from this pail of dough?

Math 10 GMF – Measurement Exam Review - answers

Show work on looseleaf. Transfer answers to the provided space **Name:___Answers___**

1. Provide the area, in square feet, of a rectangular room that has a length of 6.2 m and a width that is 2 m less than the length? **280.3 ft²**

2. Joan hiked a total of 4.6 kilometres on a walking trail. How many feet is that? **15091.86 ft**

3. The typical way to represent a length of 136 inches in is to state it as **11 feet 4 inches**.

4. A carpenter determines that he needs a total of 52 ' 9 13/16 " of baseboard trim to finish a room. The hardware store where he buys all of his material only sells it by the full metre. How many metres of baseboard will he need to buy to finish the room? **16.1 m needed – therefore, he must buy 17 m**

5. The bark on a 16-foot log with a diameter of 20 inches needs to be removed before the log is used in the construction of a log home. What is the area of bark that will be removed? (to the nearest in^2) **12064 in^2**

6. A square-based pyramid has a base length of 10 feet, a height of 49 inches and a slant length of 5 yards. What is the surface area(in m^2), including the base? **37.16 m^2**

7. Joan fills a 24 L bucket with a container that holds 6 pints (US). How many times will she have to fill up the container in order to fill up the bucket? **8.45 containers equals 1 bucket therefore 9 trips needed**

8. A circular backyard sandbox has a circumference of 12 yards. It is uniformly filled with sand that is 5 inches deep. What is the volume of sand used, in yd^3? **1.59 yd^3**

9. The temperature outdoors on a hot summer day is 95°F and the humidity makes it feel 14°F warmer. What temperature does it feel like in degrees Celsius? **42.8°C**

10. A pot of water is being boiled at a high altitude and has reached a temperature of 194°F. If the boiling point of water at this altitude is 105°C, then how many more degrees Fahrenheit must the water heat up? **27°F**

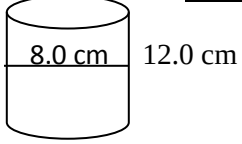
11. Steven bought 1 pound 4 ounces of washers and 2 pounds 14 ounces of bolts. What is the preferred way to represent the combined weight of his purchases? **4 lbs 2 ounces**

12. 24 ounces of strawberry jam are being sold for $6.46. What is the cost/lb of strawberry jam? **$4.31/lb**

13. Jennifer spent $23.15 **(before tax)**on salt at $0.32/lb. How many kg's of salt did she buy? **32.81 kg**

14. A paper label that is 42 cm long just fits around a cylindrical can. What is the radius, in inches, of the can (rounded to the nearest tenth)? **2.6 in**

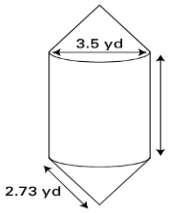
15. What is the side length (to the nearest tenth of a cm) of a cube that has the same volume as the cylinder shown below? **8.449 cm = 8.4 cm**



16. A rectangular garden measures 16 m by 10 m. In order to grow well, vegetables need about 0.6 yd^2 of space each. How many plants can you expect to grow in this garden? **318.9 so about 319 plants**

17. The object shown below is a cylinder with congruent conical ends. If the height of the cylindrical portion is 5.5 m, then determine the surface area (in yd^2) and volume (in yd^3) of the object, rounded to the nearest tenth.

SA = 96.2 yds^2 **V = 71.3 yds^3**



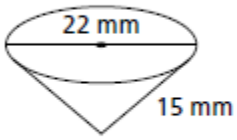
18.

An ice-cream cone is to be coated with chocolate on the inside. The cone has an interior diameter of 7.5 cm and an interior height of 10.0 cm. What is the area to be coated? Write the answer to the nearest tenth of a square unit.

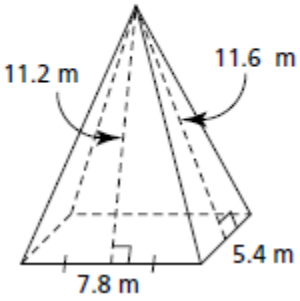
A = 125.8 cm^2

19. Find the surface area and volume of each.

c) right cone



d) right rectangular pyramid



c) **SA = 898.5 mm^2**

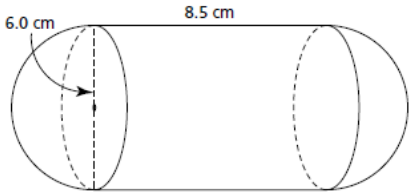
V = 1292.2 mm^3

d) SA = 192.12 m^2

V = 153.0 m^3

20. Determine the surface area and volume. **SA = 273.3 cm^2** **V = 353.43 cm^3**

a) right cylinder and hemispheres



21. **about 41 pumps**

A fitness ball is delivered in a flat package with a hand pump. The pump inflates the ball at a rate of 280 cm^3 per pump, to a diameter of 28 cm. How many pumps are needed to inflate the ball? Justify your answer.

22. **About 45 cookies**

A pail of cookie dough is cylindrical, with diameter 17 cm and height 13 cm. A scoop makes a sphere of cookie dough with diameter 5 cm. How many cookies can be made from this pail of dough?