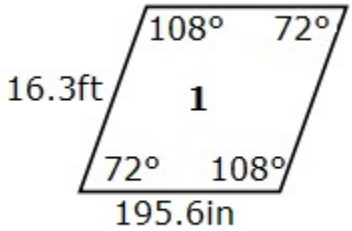
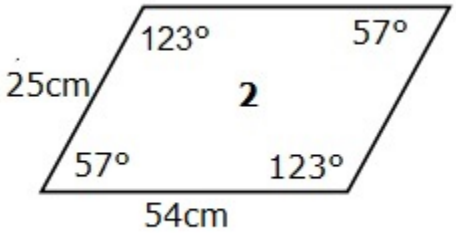
Review Test
Practical Math Foundation
Tier 2 Geometry
Introduction to Geometry – 2D

1) Identify the shape in the diagram below.



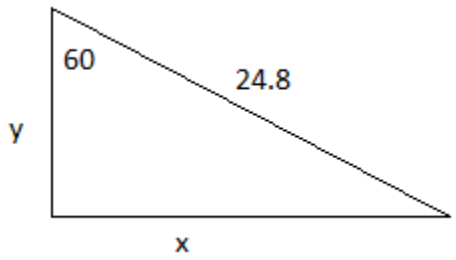
2) Using the diagram above, calculate the perimeter.

3) Identify the shape in the diagram below.



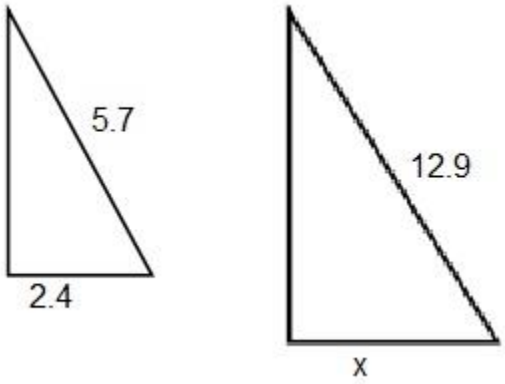
4) Using the diagram above, calculate the perimeter.

5) Given the following right triangle, find x:

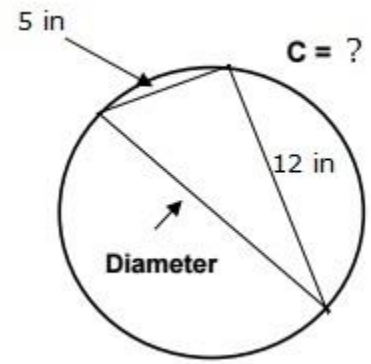


6) Using the diagram above, calculate the perimeter.

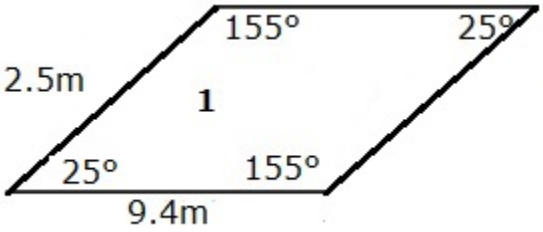
7) Given two similar triangles in the diagram below, solve for x.



8) Given the following triangle, what is the circumference of the circle?

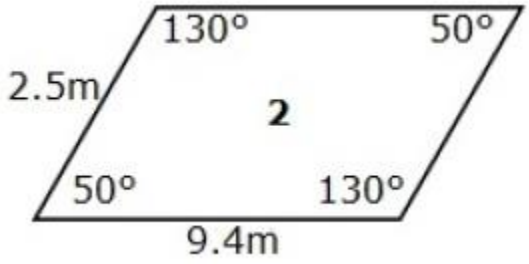


9) Name the shape.



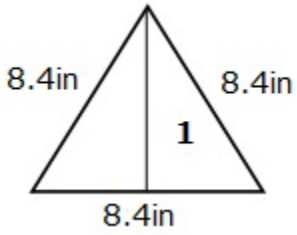
10) Using the diagram above, calculate the area.

11) Name the shape.

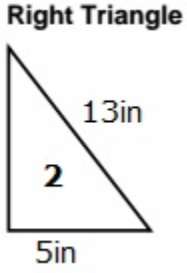


12) Using the diagram above, calculate the area.

13) Calculate the area of the following triangle.



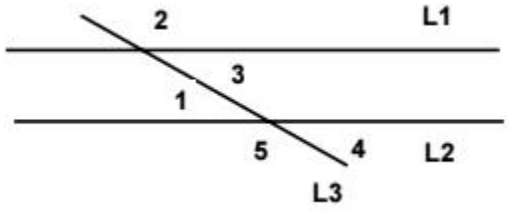
14) Calculate the area of the following triangle.



15) Angles are measured using what unit of measurement?

16) A 0-dimensional object is called what?

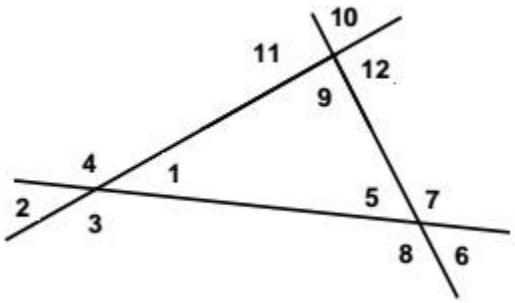
17) Given the following diagram, if <3 = 37°, what is the size of <1?



L1 ∥ L2

18) Using the diagram above, what is the size of <5?

19) Given the following diagram, if <4 = 145° and <9 = 85°,
<1 = _____°



$1 + 5 + 9 = 180^\circ$

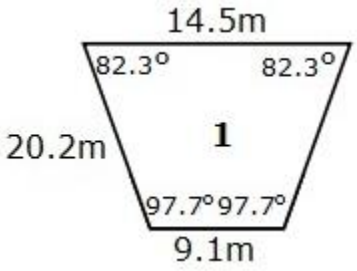
$4 = 3 = 180^\circ - 1$ $\quad 2 = 1$

$7 = 8 = 180^\circ - 5$ $\quad 6 = 5$

$11 = 12 = 180^\circ - 9$ $\quad 10 = 9$

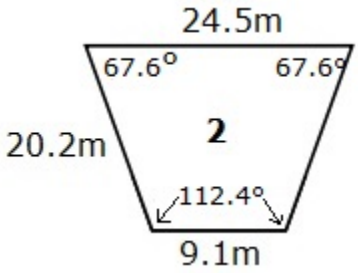
20) <2 = _____°
21) <3 = _____°
22) <5 = _____°
23) <6 = _____°
24) <7 = _____°
25) <8 = _____°
26) <10 = _____°
27) <11 = _____°
28) <12 = _____°

29) Name the shape.



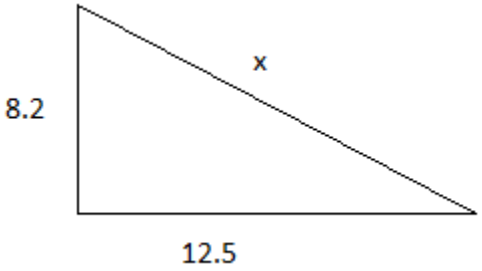
30) Using the diagram above, calculate the area.

31) Name the shape.

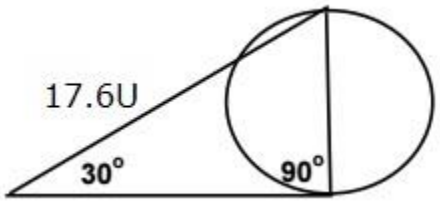


32) Using the diagram above, calculate the area.

33) Given the following right triangle, find x:



34) Find the unknowns.



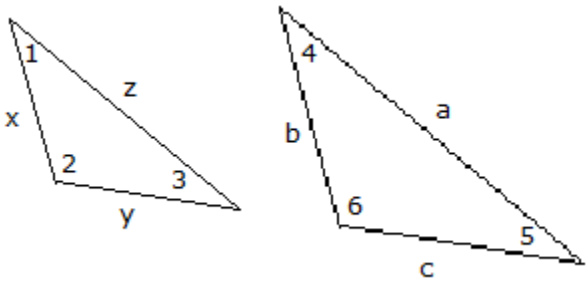
R =
D =
C =

D = _____ U

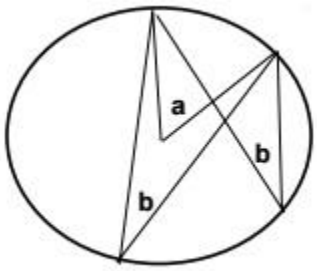
35) Using the above diagram, R = _____ U

36) Using the above diagram, C = _____ U

37) Given <1 = <4 and <2 = <6, match the corresponding sides.

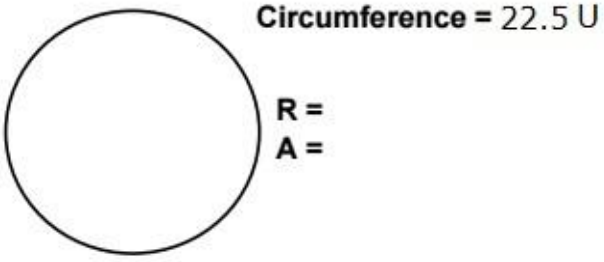


38) If <a = 84°, what is <b?



39) What is the oldest of all geometries?

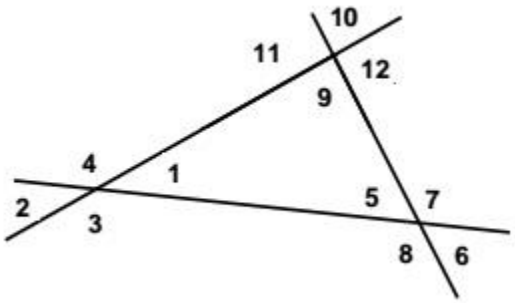
40) Find the unknowns.



R = _____ U

41) Using the diagram above, A = _____U^2

42) Given the following diagram, if <4 = 135° and <5 = 60°, <1 = _____°.



$1 + 5 + 9 = 180^\circ$

$4 = 3 = 180^\circ - 1$ $\quad 2 = 1$

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$11 = 12 = 180^\circ - 9$ $\quad 10 = 9$

43) <2 = _____°

44) <3 = _____°

45) <6 = _____°

46) <7 = _____°

47) <8 = _____°

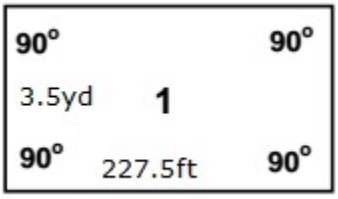
48) <9 = _____°

49) <10 = _____°

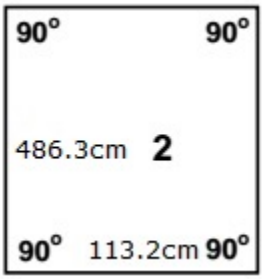
50) <11 = _____°

51) <12 = _____°

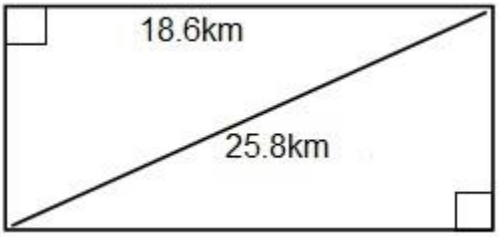
52) Calculate the area of the following rectangle.



53) Calculate the area of the following rectangle.

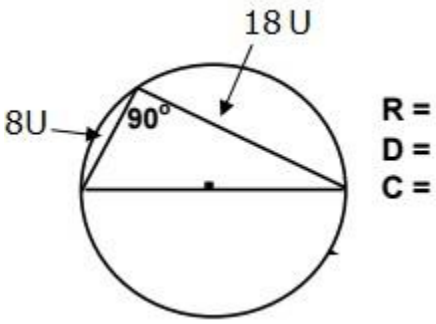


54) Identify the shape in the diagram below.



55) Using the diagram above, calculate the perimeter.

56) Find the unknowns.

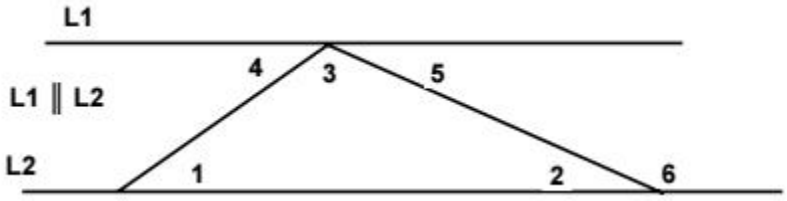


D = _____ U

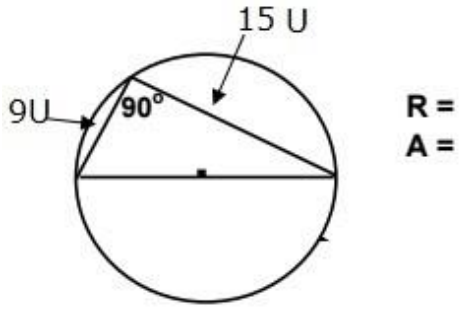
57) Using the above diagram, R = _____ U

58) Using the above diagram, C = _____ U

59) Given the following diagram, if <4 = 35° and <3 = 105°, what size is <2?



60) Find the unknowns.



R = _____ U

61) Using the diagram above, A = _____U^2

62) The intersection of two lines forms an angle. What is their point of intersection called?

Review Test Answer Key
Practical Math Foundation
Tier 2 Geometry
Introduction to Geometry – 2D

Note: Some problems require multiple steps, and rounding error can occur. In these instances, multiple correct answers have been given, depending upon how an intermediate value was rounded.

1) Shape 1: rhombus *(G7 – Quadrilaterals, Polygons, Perimeters)*
2) Perimeter = 65.2ft = 782.4in *(G7 – Quadrilaterals, Polygons, Perimeters)*
3) Shape 2: parallelogram *(G7 – Quadrilaterals, Polygons, Perimeters)*
4) Perimeter = 158cm *(G7 – Quadrilaterals, Polygons, Perimeters)*
5) x = 21.5 *(G5 – Right Triangles – Pythagorean Theorem)*
6) y = 12.4 *(G5 – Right Triangles – Pythagorean Theorem)*
7) x = 5.4 *(G6 – Similar Triangles)*
8) C = 40.8 in *(G12 – Circles Special Properties)*
9) Parallelogram *(G9 – Formulas for Polygons)*
10) area = 9.9m^2 *(G9 – Formulas for Polygons)*
11) parallelogram *(G9 – Formulas for Polygons)*
12) area = 18.0m^2 *(G9 – Formulas for Polygons)*
13) 1: 30.6 in^2 *(G8 – Area of Triangles and Rectangles)*
14) 2: 30 in^2 *(G8 – Area of Triangles and Rectangles)*
15) Degrees (°) *(G2 – Straight Lines and Angles)*
16) A point *(G1 – What is Geometry?)*
17) <1 = 37° *(G3 – Parallel Lines)*
18) <5 = 143° *(G3 – Parallel Lines)*
19) <1=35° *(G4 – Triangles, Definition, Sum of Angles)*
20) <2=35° *(G4 – Triangles, Definition, Sum of Angles)*
21) <3=145° *(G4 – Triangles, Definition, Sum of Angles)*
22) <5=60° *(G4 – Triangles, Definition, Sum of Angles)*
23) <6=60° *(G4 – Triangles, Definition, Sum of Angles)*
24) <7=120° *(G4 – Triangles, Definition, Sum of Angles)*
25) <8=120° *(G4 – Triangles, Definition, Sum of Angles)*
26) <10=85° *(G4 – Triangles, Definition, Sum of Angles)*
27) <11=95° *(G4 – Triangles, Definition, Sum of Angles)*

28) <12=95° *(G4 – Triangles, Definition, Sum of Angles)*

29) trapezoid *(G9 – Formulas for Polygons)*

30) area = 236.2m^2 (may get 236.0m^2, depending on rounding error after calculating height) *(G9 – Formulas for Polygons)*

31) trapezoid *(G9 – Formulas for Polygons)*

32) area = 313.66m^2 (may get 314.2m^2, depending on rounding error after calculating height) *(G9 – Formulas for Polygons)*
(G9 – Formulas for Polygons)

33) x = 14.95 *(G5 – Right Triangles – Pythagorean Theorem)*

34) D = 8.8 U *(G10 – Circles π Circumference)*

35) R = 4.4 U *(G10 – Circles π Circumference)*

36) C = 27.6 U *(G10 – Circles π Circumference)*

37) Sides: x/b, y/c, z/a *(G6 – Similar Triangles)*

38) <b = 42° *(G12 – Circles Special Properties)*

39) Euclidean Geometry *(G1 – What is Geometry?)*

40) R = 3.58 U *(G11 – Circles Area)*

41) A = 40.3 U^2 *(G11 – Circles Area)*

42) <1=45° *(G4 – Triangles, Definition, Sum of Angles)*

43) <2=45° *(G4 – Triangles, Definition, Sum of Angles)*

44) <3=135° *(G4 – Triangles, Definition, Sum of Angles)*

45) <6=60° *(G4 – Triangles, Definition, Sum of Angles)*

46) <7=120° *(G4 – Triangles, Definition, Sum of Angles)*

47) <8=120° *(G4 – Triangles, Definition, Sum of Angles)*

48) <9=75° *(G4 – Triangles, Definition, Sum of Angles)*

49) <10=75° *(G4 – Triangles, Definition, Sum of Angles)*

50) <11=105° *(G4 – Triangles, Definition, Sum of Angles)*

51) <12=105° *(G4 – Triangles, Definition, Sum of Angles)*

52) 2388.75ft^2 = 265.42yd^2 *(G8 – Area of Triangles and Rectangles)*

53) 55,049.16cm^2 *(G8 – Area of Triangles and Rectangles)*

54) rectangle *(G7 – Quadrilaterals, Polygons, Perimeters)*

55) perimeter = 73.0 (2x18.6 + 2x17.9) $\rightarrow 17.9=\sqrt{(25.8^2-18.6^2)}$
(G7 – Quadrilaterals, Polygons, Perimeters)

56) D = 19.7 U *(G10 – Circles π Circumference)*

57) R = 9.85 U *(G10 – Circles π Circumference)*

58) C = 61.9 U *(G10 – Circles π Circumference)*

59) <2 = 40° *(G3 – Parallel Lines)*

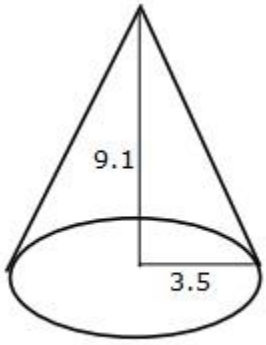
60) R = 8.75 U *(G11 – Circles Area)*

61) A = 240.5 U^2 *(G11 – Circles Area)*

62) The vertex *(G2 – Straight Lines and Angles)*

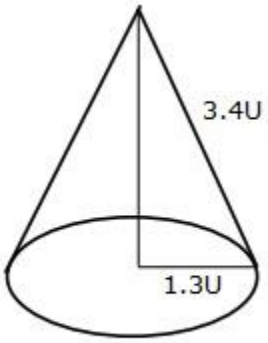
Review Test
Practical Math Foundation
Tier 2 Geometry
Introduction to Geometry – 3D

1) Calculate the volume.



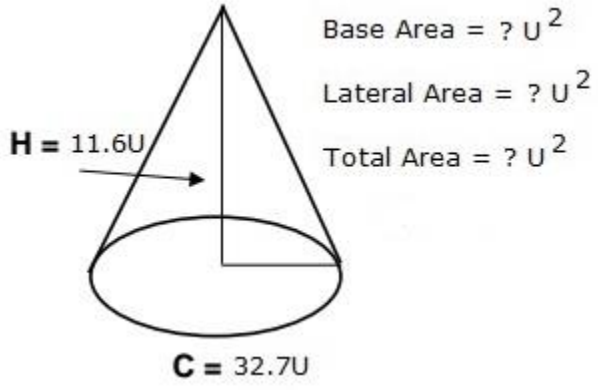
Find Volume

2) Calculate the volume.



Find Volume

3) Find the unknown areas.

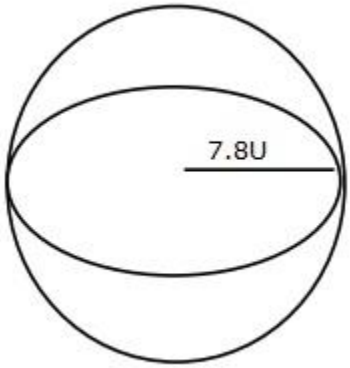


Base Area = _____ U^2

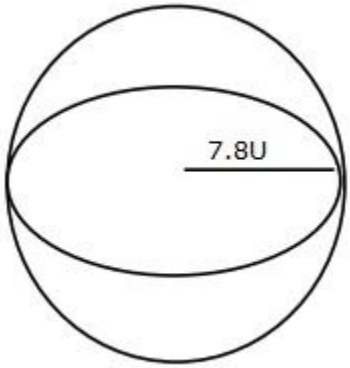
4) Using the diagram above, Lateral Area = _____ U^2

5) Using the diagram above, Total Area = _____ U^2

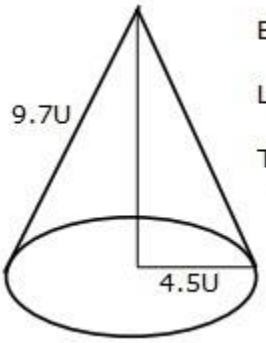
6) Calculate the surface area.



7) Calculate the volume.



8) Find the unknown areas.



Base Area = ? U^2

Lateral Area = ? U^2

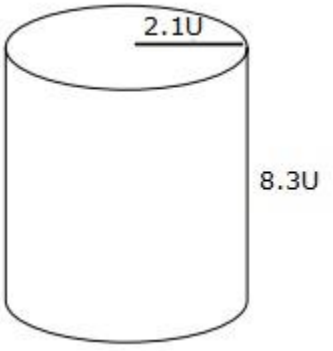
Total Area = ? U^2

Base Area = _____ U^2

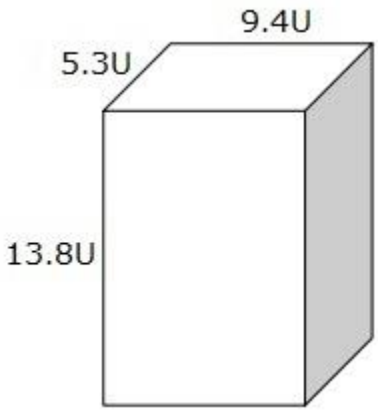
9) Using the diagram above, Lateral Area = _____ U^2

10) Using the diagram above, Total Area = _____ U^2

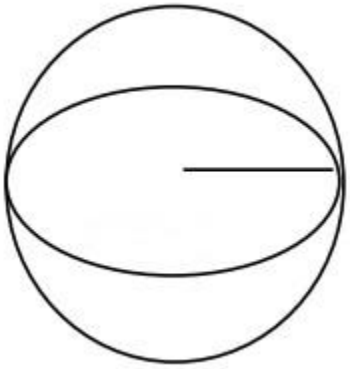
11) Calculate the total surface area.



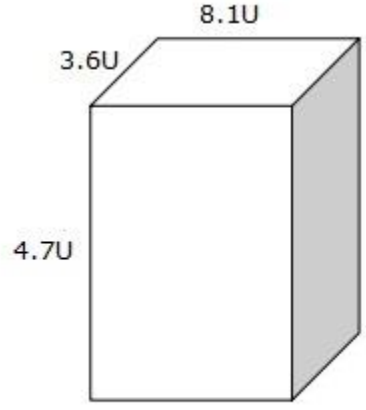
12) Calculate the total surface area.



13) Calculate the radius if the volume = 315.8 U^3.

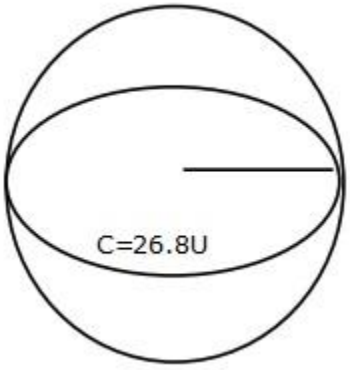


14) Calculate the volume.

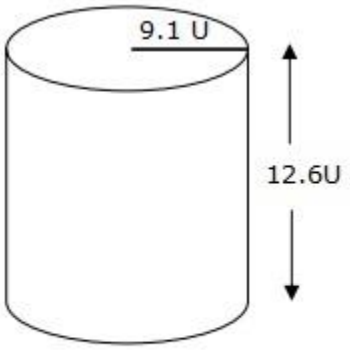


Volume = ? U^3

15) Calculate the surface area.



16) Calculate the volume.



Volume = ? U^3

Review Test Answer Key
Practical Math Foundation
Tier 2 Geometry
Introduction to Geometry – 3D

Note: Some problems require multiple steps, and rounding error can occur. In these instances, multiple correct answers have been given, depending upon how an intermediate value was rounded.

1) Volume = 116.7 U^3 *(G16 – Volumes Cones)*

2) Volume = 5.6 U^3 *(G16 – Volumes Cones)*

3) BA = 84.9 U^2 using (R = 5.2, L = 12.7)
BA = 85.1 U^2 using (R = 5.204366639, L = 12.71398569)
(G14 – Surface Areas Cones)

4) LA = 207.5 U^2 using (R = 5.2, L = 12.7)
LA = 207.9 U^2 using (R = 5.204366639, L = 12.71398569)
(G14 – Surface Areas Cones)

5) TA = 292.4 U^2 using (R = 5.2, L = 12.7)
TA = 293.0 U^2 using (R = 5.204366639, L = 12.71398569)
(G14 – Surface Areas Cones)

6) Surface area = 764.5 U^2 *(G17 – Surface Area Sphere or Ball)*

7) Volume = 1987.8 U^3
(G18 – Archimedes Tombstone, Sphere Area and Volume)

8) BA = 63.6 U^2 *(G14 – Surface Areas Cones)*

9) LA = 137.1 U^2 *(G14 – Surface Areas Cones)*

10) TA = 200.7 U^2 *(G14 – Surface Areas Cones)*

11) Surface area = $2\pi(2.1)(2.1 + 8.3) = 137.22U^2$
(G13 – Surface Areas Blocks and Cylinders)

12) Surface area = $2(5.3x9.4+5.3x13.8+9.4x13.8) = 505.36\ U^2$
(G13 – Surface Areas Blocks and Cylinders)

13) Radius = 4.2 U
(G18 – Archimedes Tombstone, Sphere Area and Volume)

14) Volume = 137.1 U^3 *(G15 – Volumes Blocks and Cylinders)*

15) Surface area = 232.4 U^2 (R=4.3 U); 229.1 U^2 (R = 4.27 U); 228.6 U^2 (R=4.265352475 U)

(G17 – Surface Area Sphere or Ball)

16) Volume = 3,278 U^3 *(G15 – Volumes Blocks and Cylinders)*