Find the volume of each figure. Round your answers to the nearest tenth, if necessary.

1) Volume of a Sphere: 
\[
\frac{4}{3} \pi r^3
\]
\[
= \frac{4}{3} (3.14) 3^3 \\
V = 113.1 \, ft^3
\]

2) 

3) 

15.6 in

4) 

7 cm

5) 

8 in

6) 

10 mi

7) A sphere with a diameter of 6.2 in.

8) A sphere with a radius of 10 mi.
Volume of Prisms and Cylinders

Find the volume of each figure. Round your answers to the nearest tenth, if necessary.

1) \[ V = \pi r^2 h \]
\[ = \pi (8^2)(7) \]
\[ V = 1407.4 \text{ km}^3 \]

2) \[ V = \pi r^2 h \]

3) \[ V = \pi r^2 h \]

4) \[ V = \pi r^2 h \]

5) \[ V = \pi r^2 h \]

6) A cylinder with a radius of 4 yd and a height of 5 yd.
Wednesday March 18

Find the volume of each prism

1) $V = lwh$
   $V = 5 \cdot 6 \cdot 7$
   $V = 210 \text{ cm}^3$

2) [Diagram of a rectangular prism]

3) [Diagram of a rectangular prism]

4) [Diagram of a rectangular prism]

5) [Diagram of a rectangular prism]

5) A square prism measuring 6 km along each edge of the base and 5 km tall.
Volume of Pyramids and Cones

Find the volume of each figure. Round your answers to the nearest tenth, if necessary.

1) \[ \text{Volume of a cone} = \frac{1}{3} \pi r^2 h \]
   \[ V = \frac{1}{3} \pi (2)^2 (1) \]
   \[ V = 29.3 \text{ mi}^3 \]

2) \[ \text{Volume of a cone} = \frac{1}{3} \pi r^2 h \]

3) \[ \text{Volume of a cone} = \frac{1}{3} \pi r^2 h \]

4) \[ \text{Volume of a cone} = \frac{1}{3} \pi r^2 h \]

5) \[ \text{A cone with radius 4 m and a height of 12 m.} \]
Find the volume of each pyramid.

Volume of pyramid = \( \frac{1}{3} (\text{base} \times \text{height}) \)

\[ V = \frac{1}{3} (33 \times 14) \times 24 \]

\[ V = 3696 \text{ u}^3 \]
Find the surface area of each figure. Round your answers to the nearest tenth, if necessary.

1) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (3)^2$
   $\text{SA} = 113.1 \text{ ft}^2$

2) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (6)^2$
   $\text{SA} = 452.4 \text{ cm}^2$

3) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (7.8)^2$
   $\text{SA} = 756.9 \text{ in}^2$

4) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (3.5)^2$
   $\text{SA} = 157.1 \text{ cm}^2$

5) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (4)^2$
   $\text{SA} = 201.1 \text{ in}^2$

6) $\text{SA} = 4\pi r^2$
   $\text{SA} = 4\pi (5)^2$
   $\text{SA} = 314.2 \text{ mi}^2$

7) A sphere with a diameter of 6.2 in.

8) A sphere with a radius of 10 mi.
Volume of Prisms and Cylinders  Tuesday 3/31  

Find the surface area of each figure. Round your answers to the nearest tenth, if necessary.

1) \[ SA_{cylinder} = 2\pi r^2 + 2\pi r h \]
\[ SA = 2\pi (8)^2 + 2\pi (8)(7) \]
\[ SA = 402.1 + 351.8 \]
\[ SA = 753.9 \text{ km}^2 \]

2) \[
\text{radius} = 10 \text{ ft}, \text{height} = 22 \text{ ft} 
\]

3) \[
\text{radius} = 8 \text{ km}, \text{height} = 14 \text{ km} 
\]

4) \[
\text{radius} = 7 \text{ in}, \text{height} = 4 \text{ in} 
\]

5) \[
\text{radius} = 5 \text{ in}, \text{height} = 4 \text{ in} 
\]

6) A cylinder with a radius of 4 yd and a height of 5 yd.
Find the Surface area of each prism.

1) \( \text{SA: } 2(2w) + 2(wh) + 2(lh) \)
   \( \text{SA} = 2(5 \cdot 6) + 2(6 \cdot 7) + 2(5 \cdot 7) \)
   \( \text{SA} = 2(30) + 2(42) + 2(35) \)
   \( \text{SA} = 60 + 84 + 70 = 214 \text{cm}^2 \)

2) \( \text{SA: } 2(7y) + 2(7y) + 2(7y) \)
   \( \text{SA} = 2(7 \cdot 7) + 2(7 \cdot 7) + 2(7 \cdot 7) \)
   \( \text{SA} = 2(49) + 2(49) + 2(49) \)
   \( \text{SA} = 98 + 98 + 98 = 294 \text{yd}^2 \)

3) \( \text{SA: } 2(9) + 2(5) + 2(7) \)
   \( \text{SA} = 2(9) + 2(5) + 2(7) \)
   \( \text{SA} = 18 + 10 + 14 = 42 \text{cm}^2 \)

4) \( \text{SA: } 2(8) + 2(8) + 2(8) \)
   \( \text{SA} = 2(8) + 2(8) + 2(8) \)
   \( \text{SA} = 16 + 16 + 16 = 48 \text{yd}^2 \)

5) \( \text{SA: } 2(15) + 2(5) + 2(16) \)
   \( \text{SA} = 2(15) + 2(5) + 2(16) \)
   \( \text{SA} = 30 + 10 + 32 = 72 \text{cm}^2 \)

6) A square prism measuring 6 km along each edge of the base and 5 km tall.
Pyramids and Cones

Find the surface area of each figure. Round your answers to the nearest tenth, if necessary.

1) \[ \text{SA of a cone} = \pi r l + \pi r^2 \]
\[ = \pi (2)(7.3) + \pi (2)^2 \]
\[ = 45.7 + 12.6 \]
\[ \text{SA} = 58.2 \text{ mi}^2 \]

2) \[ 2^2 + 7^2 = l^2 \]
\[ 4 + 49 = l^2 \]
\[ l = \sqrt{53} \]
\[ \lambda = 7.3 \]

3) \[ 18 \text{ mi} \]

4) \[ \text{A cone with radius 4 m and a height of 12 m.} \]
Find the Surface area of each pyramid!

* Extra credit if correct
- Add up all of the surfaces.

1) 
![Diagram of a pyramid with side lengths 24, 33, and 14] 

2) 
![Diagram of a pyramid with side lengths 26, 20, 20] 

3) 
![Diagram of a pyramid with side lengths 12 cm, 11 cm, 11 cm] 

4) 
![Diagram of a pyramid with side lengths 5 in, 2 in, 5 in] 

5) 
![Diagram of a pyramid with side lengths 9 mi, 6 mi, 7 mi] 

6) 
![Diagram of a pyramid with side lengths 6.3 in, 4 in, 4 in]