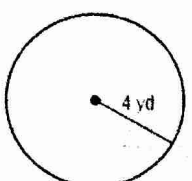
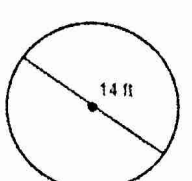


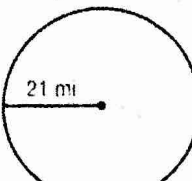
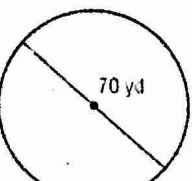
Intermediate I
Chapter 8 PRACTICE TEST

****Show every formula and equation. Show what you're plugging into the formulas. Show all your work. Circle or square your final answer. Round to the nearest hundredth if necessary****

8.1 (Finding Circumference of a Circle) Use 3.14 for Pi.

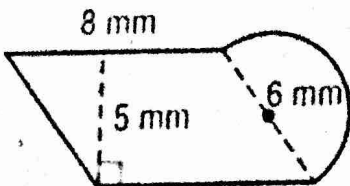
<p>1. Find the circumference of a circle whose radius is 6 inches</p> $C = 2\pi r$ $2(3.14)(6)$ <p>Circumference = <u>37.68 in</u></p>	<p>2. Find the circumference of the circle pictured below.</p>  $2(3.14)(4)$ <p>Circumference = <u>25.12 yd</u></p>	<p>3. Find the circumference of the circle pictured below.</p>  $14(3.14)$ <p>Circumference = <u>43.96 ft</u></p>	<p>4. If the circumference of a circle is 28.26, find the diameter of the circle.</p> $C = \pi d$ $\frac{28.26}{3.14} = \frac{(3.14)d}{3.14}$ <p>Diameter = <u>9 units</u></p>
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8.2 (Finding Area of a Circle) Use 3.14 for Pi.

<p>5. Find the area of a circle whose radius is 4 cm.</p> $A = \pi r^2$ $(3.14)(4^2)$ $(3.14)(16)$ <p>Area = <u>18.84 cm²</u></p>	<p>6. Find the area of the circle pictured below.</p>  $(3.14)(21^2)$ <p>Area = <u>1384.74 mi²</u></p>	<p>7. Find the area of the circle pictured below.</p>  <p>$r = 35 \text{ yds}$</p> $(3.14)(35^2)$ <p>Area = <u>3846.5 yd²</u></p>	<p>8. If the circumference of a circle is 37.68, find the area of the same circle.</p> $C = (3.14)d$ $\frac{37.68}{3.14} = \frac{3.14d}{3.14}$ <p>$d = 12 \Rightarrow r = 6$</p> $A = \pi r^2 = (3.14)(6^2)$ <p>Area = <u>113.04 units²</u></p>
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8.3 (Find the Area of a Composite Figure)

9. Find the area of the figure below. Show your work for each part.



parallelogram
 $8 \times 5 = 40 \text{ mm}^2$

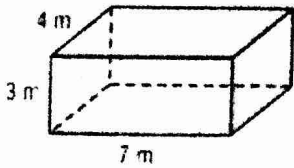
semicircle:
 $(3^2)(3.14)$
 $(9)(3.14)$

Total area: 54.13 mm²

$\frac{28.26}{2} = 14.13$

8.4 (Find the Volume of a Prism)

10.

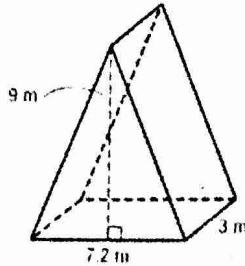


$$l \cdot w \cdot h = V$$

$$7 \cdot 4 \cdot 3$$

Volume = 84 m³

11.



$$\frac{(7.2)(9)}{2} \cdot 3$$

Volume = 297.2 m³

12. United Gravel sells sand per cubic foot. You just built a new sandbox for your back yard with dimensions 10 feet long, 8 feet wide, and 1.5 feet tall. Is 100 cubic feet enough to fill your sandbox? Explain.

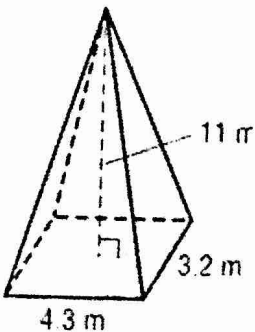
$$(1.5)(10)(8) = 120 \text{ ft}^3$$

NO, you will need 120 ft³.
If the sand costs \$1.25 per cubic foot, how much will it cost to FILL your sandbox? \$150

$$(120)(1.25) = \$150$$

8.5 (Find the Volume of a Pyramid)

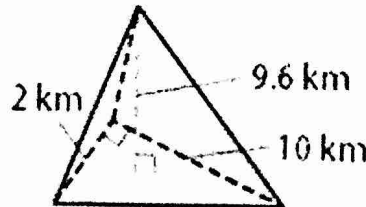
13.



$$\frac{(4.3)(3.2)(11)}{3}$$

Volume = 50.45 m³

14.



triangle:
 $\frac{(2)(10)}{2} = 10 \text{ km}^2$

$$\frac{(10)(9.6)(\frac{1}{3})}{1}$$

Volume = 32 km³

15. Ms. Ruud has a cube of cheese that measures 7 in x 7 in x 7 in. If she carves a pyramid out of this cube that has a base measuring 7 in x 7 in and has a height of 5 inches, how much cheese is left over?

Cube: $7 \times 7 \times 7 = 343 \text{ in}^3$

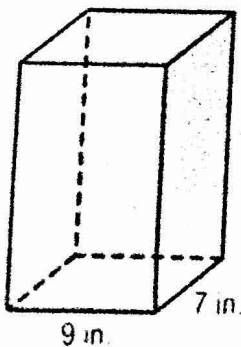
Pyramid: $\frac{7 \times 7 \times 5}{3} = 81\frac{2}{3} \text{ in}^3$

$$343 - 81\frac{2}{3}$$

Cheese leftover = 261\frac{1}{3} \text{ in}^3
261.33 in³

8.6 (Find the Surface Area of a Prism)

16.



$$\begin{array}{r} 126 \\ + 210 \\ 270 \\ \hline 606 \end{array}$$

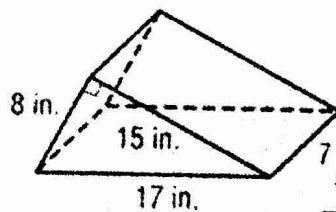
$$9 \cdot 7 \cdot 2 = 126 \text{ in}^2$$

$$7 \cdot 15 \cdot 2 = 210 \text{ in}^2$$

$$9 \cdot 15 \cdot 2 = 270 \text{ in}^2$$

Surface Area = 606 in²

17.



$$\frac{8 \cdot 15}{2} = 60 \text{ in}^2$$

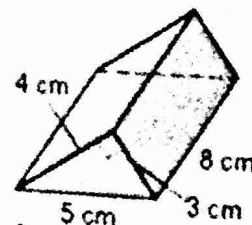
$$(15)(7) = 105 \text{ in}^2$$

$$(17)(7) = 119 \text{ in}^2$$

$$(8)(7) = 56 \text{ in}^2$$

Surface Area = 400 in²

18. Thomas wants to paint his prism-shaped art project and needs to know how much paint to buy. Each tube of paint covers 75 cm². How many tubes of paint will Thomas need?



$$\frac{(3)(4)}{2} = 6 \text{ cm}^2$$

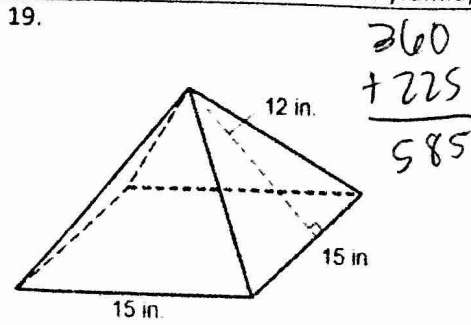
$$(4)(8) = 32 \text{ cm}^2$$

$$(3)(8) = 24 \text{ cm}^2$$

$$(5)(8) = 40 \text{ cm}^2$$

Tubes of paint = 108 cm²

8.7 (Find the Surface Area of a Pyramid)

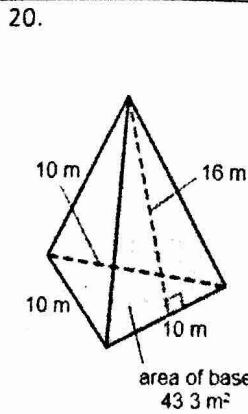


$$(15)(15) = 225 \text{ in}^2$$

$$\frac{(15)(12)}{2} = 90 \text{ in}^2$$

$$90 \times 4 = 360 \text{ in}^2$$

Surface Area = 585 in²

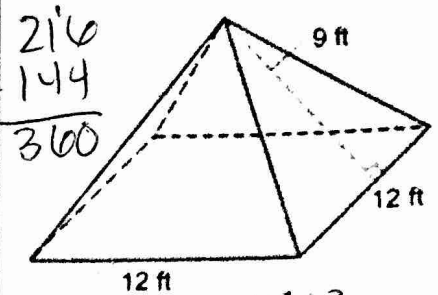


$$\frac{(10)(16)}{2} = 80 \text{ m}^2$$

$$80 \cdot 3 = 240$$

Surface Area = 283.3 m²

21. Your family is camping out in the tent in the back yard. Find the surface area of the tent you're sleeping in.



$$(12)(12) = 144 \text{ ft}^2$$

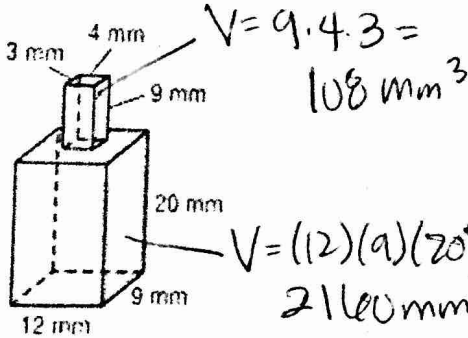
$$\frac{(12)(9)}{2} = 54 \text{ ft}^2$$

$$(54)(4) = 216 \text{ ft}^2$$

Surface Area = 360 ft²

8.8 (Find the Volume and Surface Area of Composite Figures)

22. Find the volume of the composite figure:

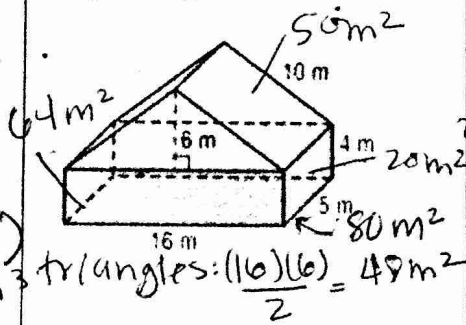


Total Volume:

$$= 108 + 2160 = 2268 \text{ mm}^3$$

Volume = 2268 mm³

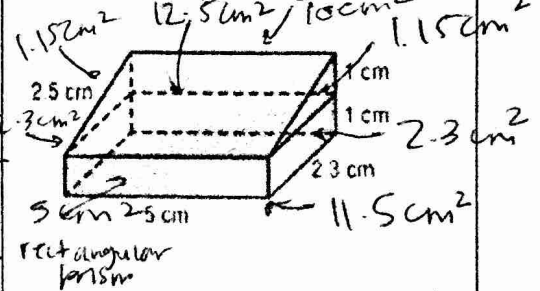
23. Find the surface area of the composite figure:



$$48 + 48 + 20 + 20 + 64 + 64 + 80 + 50 + 50 = 444 \text{ m}^2$$

Surface Area = 444 m²

24. Find the volume and surface area of the composite figure:



$$V = (5)(2.3)(1) = 11.5 \text{ cm}^3$$

$$\frac{(2.3)(1)(5)}{2} = 5.75 \text{ cm}^3$$

Surface Area = 45.9 cm²

Volume = 17.25 cm³

$$11.5 + 5.75$$

$$5 + 5 + 5 + 11.5 + 2.3 + 1.15 + 12.5 + 1.15 + 2.3 = 45.9 \text{ cm}^2$$