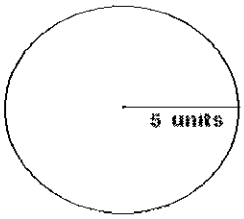
Module 4 Test Review – complete all work on lined paper. Include work and formula for each question.

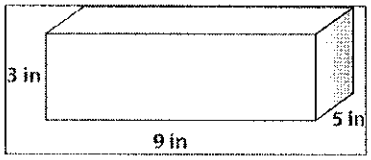
Questions 1-2. Find the Circumference and Area of the circle. Round your answer to the nearest tenth if necessary.

1.

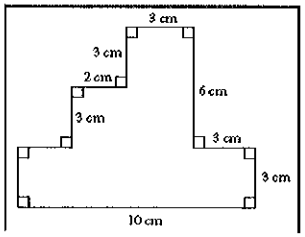


2. A circle with a diameter of 12 m.

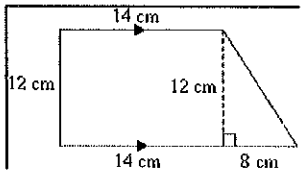
3. The circumference of a circle is 10 yards. What is the diameter?
4. Find the surface area and the volume of the rectangular prism.



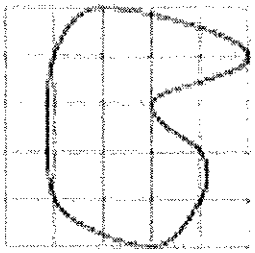
5. A cylinder has a radius of 4 inches and a height of 12 inches.
   a. Find the surface area
   b. Find the volume.
6. Find the area of the composite shape.



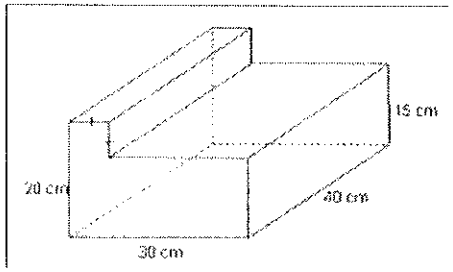
7. Find the are of the composite shape.



8. Estimate the area of the figure.

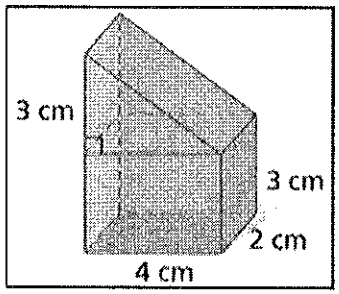


9.



a. Find the surface area.
b. Find the volume.

10.



a. Find the surface area.
b. Find the volume.

Answers:

1. Circumference: 31.4 units
   Area 78.5 square units
2. Circumference 37.7 m
   Area 113.0 m^2
3. $d \approx 3.2\ yd$
4. SA =129 in^2
   V= 135 in^3
5. SA=401.9 in^2
   V=602.9in^3
6. 34 cm^2
7. 216cm^2
8. Acceptable answers are between 12.5 and 14 square units
9.
   a. 4650 cm^2
   b. C=19000cm^3
10.
   a. 72 cm^2
   b. 36cm^3

1. $C = 2\pi r$
$= 2(3.14)(5)$
31.4 units

$A = \pi r^2$
$= 3.14(5)^2$
78.5 units^2

2. $C = \pi d$
$3.14(12)$
37.68
37.7 m

$A = \pi r^2$
$3.14(6)^2$
$(3.14)(36)$
113.04
113.0 m^2

3. $C = \pi d$
$10 = 3.14d$
$3.18 = d$
$d \approx 3.2$ yd

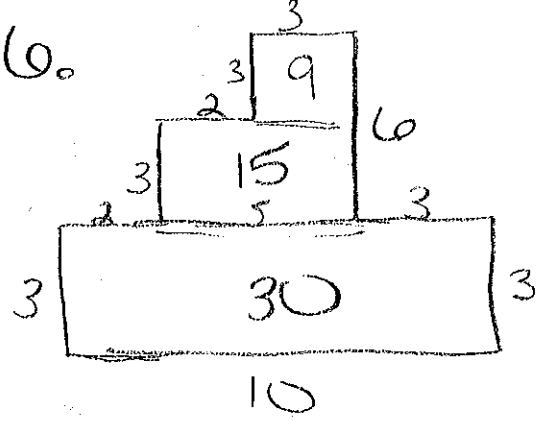
4. $SA = Ph + 2B$
$28(3) + 2(9)(5)$
$84 + 45$
129 in^2

$V = Bh$
$9.5 \cdot 3$
$45 \cdot 3$
135 in^3

challenge
5) $SA = Ph + 2B$
$(\pi d)h + 2(\pi r^2)$
$3.14 \cdot 8 \cdot 12 + 2(3.14 \cdot 4^2)$
$301.44 + 100.48$
401.92
401.9 in^2

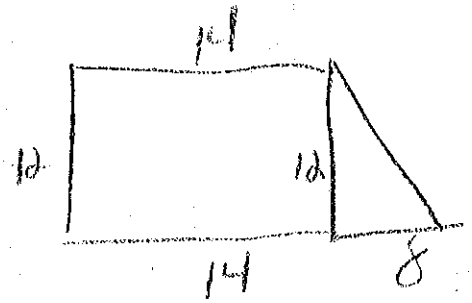
$V = Bh$
$\pi r^2 \cdot h$
$3.14(10) \cdot 12$
602.88
602.9 in^3

6.



10+15+9 = 34 cm²

7.



12 × 14 = 168

$\frac{1}{2}bh$

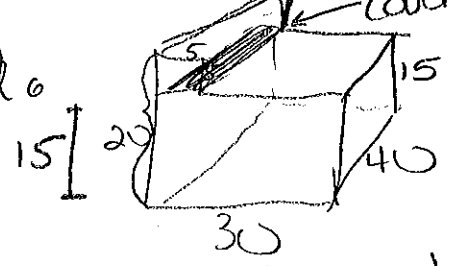
$\frac{1}{2} \cdot 12 \cdot 8$

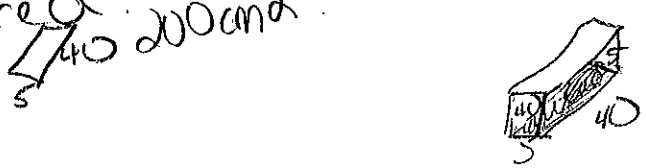
48

216 cm²

8. acceptable answers between 12.5 and 14 units²

9. a.





large rectangular Prism

$SA = Ph + 2B$

$(40+40+30+30)$

$120(15) + 2(40)(30)$

$1800 + 2400$

4200 cm^2

small rect prism

$Ph + 2B$

$90 \cdot 5 + 2(5 \cdot 40)$

$450 + (400)$

850 cm^2

Remember to subtract covered area.

$4000 + 650$

4650 cm^2

b. $V = Bh$

large: $(30)(40)(15)$

small: $(5)(5)(40)$

$18000 + 1000$

19000 cm^3

10. a. rect. prism.

$SA = Ph + 2B$

$12(3) + 2(8)$

$36 + 16$

52

-8

44

triang. prism.

$Ph + 2B$

$12(2) + 2(\frac{1}{2} \cdot 4 \cdot 3)$

$24 + 12$

36

-8

28

Covered Area

4×2

8

72cm^2

b. $V = Bh$

$8 \cdot 3$

24

$V = Bh$

$\frac{1}{2} \cdot 3 \cdot 4 \cdot 2$

12

$24 + 12$

36cm^3