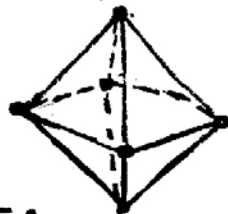


LIBERAL ARTS MATH I GEOMETRICS EXAM R NAME

Show all work as necessary on this test or separate paper.
 CIRCLE ANSWERS. Turn in all work sheets. (Answers may be left in "π".)
 CALCULATORS ALLOWED.

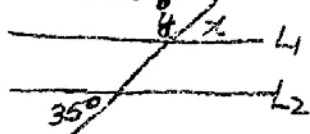
1. Given the solid:

- a) Number of vertices _____
- b) Number of edges _____
- c) Number of surfaces _____
- d) $V + S - E =$ _____



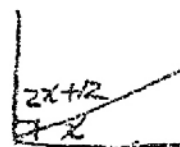
- 2a) 250 cm = _____ m.
- b) 250 mg = _____ g.
- c) .025 l = _____ mL.
- d) 0.025 l = _____ kL
- e) 3.54 km = _____ m.
- f) 3.54 g = _____ kg.

3. L_1 is parallel to L_2
 Find x and y .



$x =$ _____
 $y =$ _____

4. Find x and the angles:



$x =$ _____
 $2x+12 =$ _____

5. Find x and y .



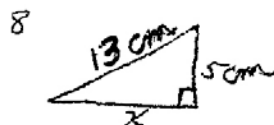
$x =$ _____
 $y =$ _____

6. Find the sum of the angles of a hexagon.

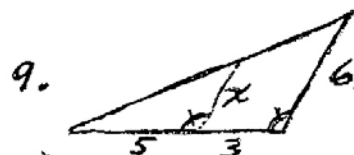
(4pts)

7. Find each angle of a regular pentagon.

(4pts)



- a) Find $x =$ _____
- b) Perimeter = _____
- c) Area = _____



9. Find $x =$ _____

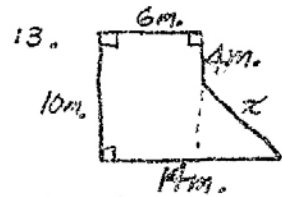
10. If a yardstick (3 feet) casts a shadow 5 feet long, how tall is a tree whose shadow is 65 feet long?

(4 points)

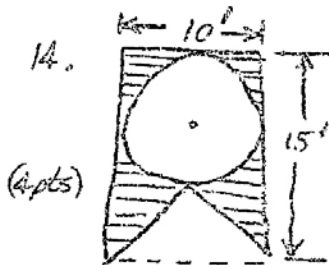
HANDWRITING GEOMETRIC MEASURES EXAM P2 NAME _____
 BE SURE TO GIVE UNITS!!

11. Find the circumference and area of a circle whose diameter is 40cm.

12. Find the perimeter and area of a rectangle whose width is 6" and whose length is 4'.



- a) Find x
 b) Perimeter =
 c) Area =



Find shaded area:

- 15a) How many square feet are in one square yard? _____
 b) How many cubic feet are in one cubic yard? _____
 c) How many square cm. are in one square meter? _____
 d) How many cubic cm. are in one cubic meter? _____

16a) If the dimensions of a rectangle are doubled, what happens to its area?

b) If the dimensions of a solid are quadrupled, what happens to its volume?

$$V = \frac{1}{3} \pi r^2 h$$

$$V = \pi r^2 h$$

$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{1}{3} Bh$$

(BE SURE TO GIVE UNITS!!!)

17a) Give the volume of a box if $l=10m$, $w=3m$, and $h=2m$.

18a) Give the volume of a cylinder if the height is 20cm, and the diameter of the base is 20cm.

19. Give the volume of a cone whose height is 4cm. and whose base is of radius 6cm.

b) Give surface area.

f) Give total surface area.

20. Give the volume of a pyramid whose base is 8' by 10' and whose height is 12'.

21. Find the volume of (4pts) a sphere whose diameter is 10 inches.

22. Find the area shaded: (4pts)



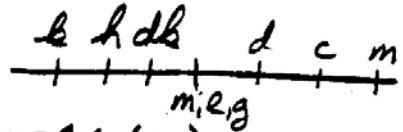
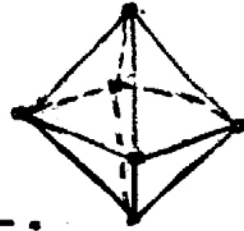
LIBERAL ARTS MATH I GEOMETRICS EXAM NAME _____

Show all work as necessary on this test or separate paper.

CIRCLE ANSWERS. Turn in all work sheets. (Answers may be left in "π".)
CALCULATORS ALLOWED.

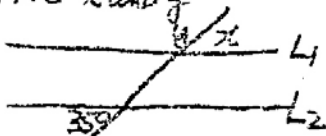
1. Given the solid:

- a) Number of vertices 6
- b) Number of edges 12
- c) Number of surfaces 8
- d) $V + S - E = \underline{2}$



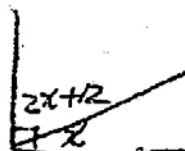
- 2a) $250 \text{ cm} = \underline{2.5 \text{ m}}$. (2L) d) $0.025 \text{ l} = \underline{0.000025 \text{ kl}}$ (3L)
- b) $250 \text{ mg} = \underline{0.25 \text{ g}}$. (3L) e) $3.54 \text{ km} = \underline{3540 \text{ m}}$. (3R)
- c) $.025 \text{ l} = \underline{25 \text{ ml}}$. (3R) f) $3.54 \text{ g} = \underline{0.00354 \text{ kg}}$. (3L)

3. L_1 is parallel to L_2
Find x and y



$x = 35^\circ$
 $y = 145^\circ$

4.



Find x and the angles:

$3x + 12 = 90$

$3x = 78$

$x = 26$

$2x + 12 = 64^\circ$

5.



$x = 47^\circ$
 $y = 107^\circ$

6. Find the sum of the angles of a hexagon.

(4pts) $4 \times 180 = \underline{720^\circ}$

7. Find each angle of a regular pentagon.

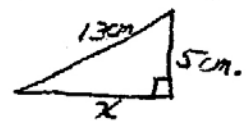
(4pts)



$3 \times 180 = \underline{540^\circ}$

$= \underline{108^\circ}$

8.



a) Find $x = \underline{12 \text{ cm}}$

b) Perimeter = 30 cm

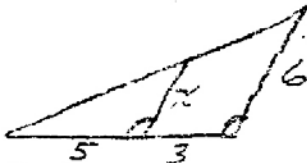
c) Area = 30 sq cm

$P = 12 + 5 + 13 = 30 \text{ cm}$

$A = \frac{1}{2} b \cdot h$

$= \frac{1}{2} 12 \cdot 5 = 30 \text{ cm}^2$

9.

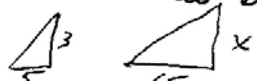


(4pts) Find x :

$\frac{x}{6} = \frac{6}{6}$

10. If a yardstick (3 feet) casts a shadow 5 feet long, how tall is a tree whose shadow is 65 feet long?

(4pts)



$\frac{3}{x} = \frac{5}{65}$

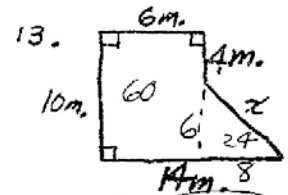
NAME: _____
 BE SURE TO GIVE UNITS!!

11. Find the circumference and area of a circle whose diameter is 40cm.

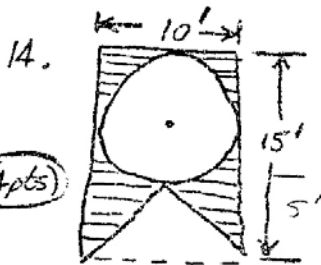
$r = 20$
 $C = \pi d = 40\pi \text{ cm.}$
 $A = \pi r^2 = \pi \cdot 20^2 = 400\pi \text{ sq cm.}$

12. Find the perimeter and area of a rectangle whose width is 6" and whose length is 4'.

$P = 9'$
 $A = 2 \text{ sq ft.}$
 288 in



13. a) Find $x = 10$
 b) Perimeter = 44m
 c) Area = 84 sq m.



14. Find shaded area:
 150 sq ft.
 - 25 sq ft.
 - 25π sq ft.
125 - 25π sq ft.

15a) How many square feet are in one square yard? 9
 b) How many cubic feet are in one cubic yard? 27
 c) How many square cm. are in one square meter? $10,000 \text{ cm}^2$
 d) How many cubic cm. are in one cubic meter? $100^3 = 1,000,000$

16a) If the dimensions of a rectangle are doubled, what happens to its area? Mult by 4.
 b) If the dimensions of a solid are quadrupled, what happens to its volume? Mult by 64.

(BE SURE TO GIVE UNITS!!!)
 $V = \pi r^2 h$
 $V = \frac{4}{3} \pi r^3$
 $V = \frac{1}{3} Bh$

17a) Give the volume of a box if $l = 10\text{m}$, $w = 3\text{m}$, and $h = 2\text{m}$.

$V = 60 \text{ cu m.}$

b) Give surface area.

$A = 60 + 40 + 12$
112 sq m.

18a) Give the volume of a cylinder if the height is 20cm, and the diameter of the base is 20cm.

$V = \pi \cdot 10^2 \cdot 20 = 2000\pi \text{ cu cm.}$

b) Give total surface area.

$SA = 2\pi rh + 2\pi r^2$
 $= 2\pi \cdot 10 \cdot 20 + 2\pi \cdot 100$
 $= 400\pi + 200\pi = 600\pi \text{ sq cm.}$

19. Give the volume of a cone whose height is 4cm, and whose base is of radius 6cm.

$V = \frac{1}{3} \pi r^2 h$
 $= \frac{1}{3} \pi \cdot 36 \cdot 4$
 $48\pi \text{ cu cm.}$

20. Give the volume of a pyramid whose base is 8' by 10' and whose height is 12'.

$V = \frac{1}{3} Bh = \frac{1}{3} \cdot 80 \cdot 12$
 $= 320 \text{ cu'}$

21. Find the volume of a sphere whose diameter is 10 inches.

$V = \frac{4}{3} \pi r^3$
 $= \frac{4}{3} \pi 5^3$

22. Find the area shaded.



$\frac{\pi r^2}{2} - \frac{1}{2} bh =$