

SHOW ALL WORK ON THIS TEST or ON SEPARATE PAPER.

No CALCULATORS. Leave answers in terms of π . GIVE ALL UNITS!


1a) 750 m. = _____ km.

b) 750 mg. = _____ cg.

c) 750 l. = _____ cl.

d) 3 kg = _____ mg

e) 3 cm = _____ km

2. 

a) No. of vertices = _____

b) No. of edges = _____

c) No. of faces = _____

d) $v - e + f =$ _____

3. The length of a rectangle is twice the width. The perimeter is 60 feet. Find length and width.

4. A circle has a radius of 7 meters.

a) Circumference = _____

b) Area = _____

5. The area of a circle is 16π sq cm.

a) Find the radius.

b) Diameter = _____

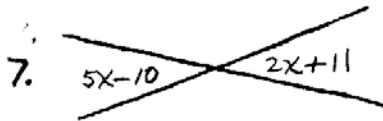
c) Circumference = _____

6. Find x and the angles:

$\frac{5x+12}{2x}$

$x =$ _____

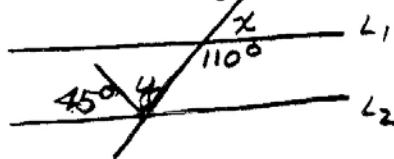
Angles = _____



a) $x =$ _____

b) angle = _____

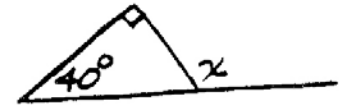
8. If L_1 is parallel to L_2 , find x and y .



$x =$ _____

$y =$ _____

9. Find x :



$x =$ _____

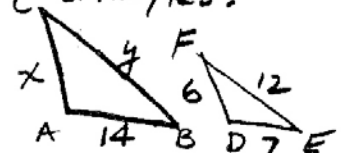
10. Find the sum of the angles of a pentagon.

11. A ship leaves a port sailing 6 miles east, then 8 miles north. How far is it from the port?

Equation: _____

Distance = _____

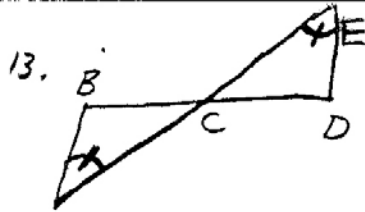
12. Given the similar triangles:



Find x & y :

$x =$ _____

$y =$ _____



Complete the proportion:

$$\frac{AB}{ED} = \underline{\hspace{2cm}}$$

14a) How many square feet in one square yd? $\underline{\hspace{2cm}}$

b) How many cubic feet in one cubic yd? $\underline{\hspace{2cm}}$

c) How many square cm in one square m? $\underline{\hspace{2cm}}$

d) How many cubic cm in one cubic m? $\underline{\hspace{2cm}}$

e) If there are 5 giggles in one gaggle,

e) how many square giggles in a sq. gaggle? $\underline{\hspace{2cm}}$

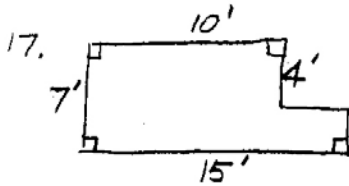
f) how many cubic giggles in a cubic gaggle? $\underline{\hspace{2cm}}$

15. A 5 ft by 7 ft rectangular wall can be painted for \$20. Find the cost to paint a 10 ft by 21 ft wall.

16. Find the volume and surface area of a box that is 10 ft by 8 ft by 6 ft.

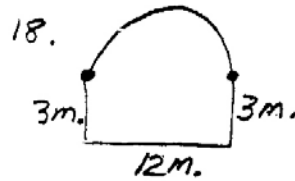
$V =$

surface area =



Area = $\underline{\hspace{2cm}}$

Perim = $\underline{\hspace{2cm}}$



Area = $\underline{\hspace{2cm}}$

Perim = $\underline{\hspace{2cm}}$

19a) Find the volume of a cylinder whose base radius is 10 cm. and whose height is 10 cm.

b) Find the volume of a cone whose base radius is 10 cm. and whose height is 10 cm.

20. Find the volume of a sphere

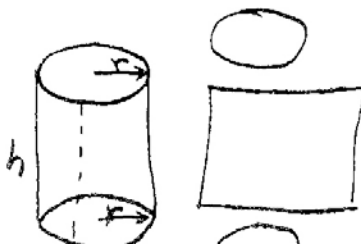
a) whose radius is 10 m.

b) whose diameter is 10 m.

21a) What happens to the area of a rectangle when you double the dimensions?

b) What happens to the volume of a cube when you double the dimensions?

22.



Surface Area

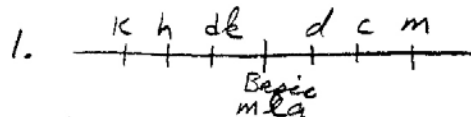
= $\underline{\hspace{2cm}}$

$$V = \frac{4}{3}\pi r^3 \quad V = \pi r^2 h \quad V = \frac{1}{3}\pi r^2 h$$

BE SURE TO GIVE UNITS

1. What is the area of a circular region whose diameter is 12 cm.?
A. 144π cm² B. 36π cm² C. 24π cm² D. 12π cm²
2. What is the area in square feet of a triangle whose base is 18 feet and whose height is 20 inches?
A. 360 ft² B. 180 ft² C. 30 ft² D. 15 ft²
3. What is the volume in centiliters of a 5.25-liter bottle?
A. 5250 cl B. 525 cl C. 52.5 cl D. 0.525 cl
4. The amount of wall surface that can be covered by the contents of a can of paint is given by which measure?
A. gallons B. liters C. feet D. square feet
5. Calculate the sum of the measures of the interior angles of an eight-sided convex polygon.
A. 1440° B. 1260° C. 1080° D. 1000°
6. A patio is to be built of concrete. The base of the patio is to be a slab of concrete 15 feet long by 12 feet wide by 6 inches thick. If one cubic yard of concrete costs \$39, how much will the concrete for the patio cost?
A. \$3510 B. \$1560 C. \$130 D. \$65
7. A fence that costs \$6.50 per yard is to be placed around a rectangular yard that is 90 feet by 120 feet. What is the total cost of the fence?
A. \$7800 B. \$2730 C. \$1365 D. \$910
8. What will be the cost of carpeting an office that measures 12 feet by 15 feet if the carpet costs \$12.50 per square yard?
A. \$2250 B. \$750 C. \$650 D. \$250
9. A tent is being set up with a 12-foot pole in the center. Four pieces of heavy-duty rope are to be attached from the top of the center pole to points on the ground that are 9 feet from the base of the pole. What is the total length of the four pieces of rope?
A. 60 feet B. 50 feet C. 45 feet D. 15 feet
10. The owner of a rectangular piece of land 12 yards in length and 9 yards in width wants to divide it into two parts. He plans to join two opposite corners with a fence. The cost of the fence will be approximately \$40 per linear foot. What is the estimated cost for the fence needed by the owner?
A. \$27,000 B. \$2520 C. \$1800 D. \$1260

FINITE MATH GEOMETRICS Form B Solutions



- a) $750 \text{ m} = \underline{0.750 \text{ km}}$
- b) $750 \text{ mg} = \underline{75 \text{ cg}}$
- c) $750 \text{ l} = \underline{75000 \text{ cl}}$
- d) $3 \text{ kg} = \underline{3,000,000 \text{ mg}}$
- e) $3 \text{ cm} = \underline{0.00003 \text{ km}}$

- 2a) $V = 5$
- b) $F = 8$
- c) $F = 5$
- d) 2

3. Let $x = \text{width}$
 $2x = \text{length}$
 $2(x) + 2(2x) = 60$
 $6x = 60$
 $x = 10 \text{ ft W}$
 $2x = 20 \text{ ft L}$

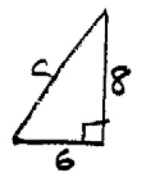
4. $r = 7 \text{ m}$
 a) $C = 2\pi r = 14\pi \text{ m}$
 b) $A = \pi r^2 = 49\pi \text{ m}^2$

5. $A = 16\pi = \pi r^2$
 $r^2 = 16$
 $r = 4 \text{ cm}$
 $d = 8 \text{ cm}$
 $C = \pi d = 8\pi \text{ cm}$

6. $5x + 12 + 2x = 180$
 $7x = 168$
 $x = 24^\circ$
 Angles = $2x = 48^\circ$
 $5x + 12 = 132^\circ$

7. $5x - 10 = 2x + 11$
 $3x = 21$
 $x = 7^\circ$
 6) $5x - 10 = 25^\circ$
 8. $x + 110 = 180^\circ$
 $x = 70^\circ$
 $y + 45 = 110^\circ$
 $y = 65^\circ$
 9. $x = 90^\circ$
 $x = 130^\circ$

10. Pentagon = 5 sides
 $\frac{5 \times 180^\circ}{2} = 540^\circ$



11. $a^2 + b^2 = c^2$ - OR - 3,4,5
 $6^2 + 8^2 = c^2$
 $36 + 64 = c^2$
 $c^2 = 100$
 $c = 10$

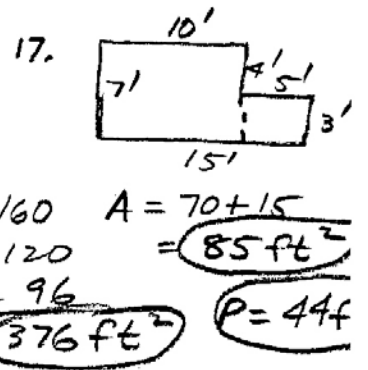
12. $\frac{x}{6} = \frac{14}{7} = \frac{2}{1}$
 $x = 12$
 $\frac{y}{12} = \frac{14}{7} = \frac{2}{1}$
 $y = 24$

13. $\frac{AB}{ED} = \frac{AC}{EC} \sim \frac{BC}{CD}$

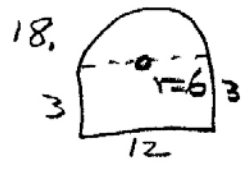
14a) $3^2 = 9$
 b) $3^3 = 27$
 c) $100^2 = 10000$
 d) $100^3 = 1000000$
 e) $5^2 = 25$
 f) $5^3 = 125$

15. $\frac{10 \times 7}{2} = \frac{20}{3} \times 3$
 $x = 6 \times 20 = 120$

16a) $V = LWH$
 $= 10 \times 8 \times 6$
 $= 480 \text{ ft}^3$



b) $SA = 2(10 \times 8) = 160$
 $+ 2(10 \times 6) = 120$
 $+ 2(8 \times 6) = 96$
 376 ft^2
 $A = 70 + 15 = 85 \text{ ft}^2$
 $P = 44 \text{ ft}$



$P = 18 + \text{Semi.}$
 $\text{Semi} = \frac{\pi d}{2} = \frac{12\pi}{2} = 6\pi$
 $P = 18 + 6\pi \text{ m}$

19a) $V = \pi r^2 h$
 $= 1000\pi \text{ cm}^3$
 b) $V = \frac{1}{3} \pi r^2 h$
 $= \frac{1000\pi \text{ cm}^3}{3}$

20a) $V = \frac{4}{3} \pi r^3$
 $= \frac{4}{3} \pi \cdot 10^3$
 $= \frac{4000\pi \text{ m}^3}{3}$

$A_{\text{rect.}} = 36 \text{ m}^2$
 $A_{\text{circle}} = \frac{\pi r^2}{2} = \frac{36\pi}{2} = 18\pi$

21a) Times 2^2 is 4
 b) Times 2^3 is 8
 22. Top = πr^2 , Bottom = πr^2
 Side = $2\pi r h$

b) $d = 10$ $r = 5$
 $V = \frac{4}{3} \pi 5^3$
 $= \frac{500\pi \text{ m}^3}{3}$

