Review for Test #4 over Chapters 7 & 8

Work all the problems on a separate piece of paper showing all steps.

Find the following:

1) 7.67 hm = _____ dam

2) 6.52 ml = _____ dl

3) 7.8 L = _____ pt

4) – 85˚ F = _____ C

5) 5 mi = _____cm

6) $\frac{77\,dg}{300\ m} = \frac{\quad g}{km}$

7) 6 dg = _____ lb

8) $\frac{\$6.24}{lb} = \frac{\$\quad}{oz}$

9) 127 in = ___ yd ___ ft ___ in

10) 12.6˚ C = _____ F

11) $\frac{99\ Yen}{L} = \frac{\$}{gal}$ (110 Yen ≈ $1)

12) 7 gal 3 qt 2 pt = ____ c

13)
8 mi 3000 ft 7 in
+ 10 mi 4000 ft 9 in

14)
24 days 19 hr 57 sec
– 9 days 23 hr 59 sec

15) (7 tons 3 lb 2 oz) ÷ 5

16) 8•(7 gal 3 qt 2.25 c)

17) 5 kg – 2 lb

18) (10 mi 4000 ft 4 in) ÷ 7

19) 8.6 km – 192 m + 4.3 dam

Solve the following:

20) Tom wants to replace a 225 in^3 engine with a new engine that is the same size. If all new engines are measured in liters as opposed to cubic inches, what liter size engine (to the nearest tenth of a liter) must Tom get?

21) Bobbi of the Yarn Barn of San Antonio has 7 yd 2 ft 6 in of 14–point canvas. If a customer buys 1 yd 2 ft 10 in of the 14–point canvas, how much of the canvas does she have left?

22) At HEB, Samuel is assembling 25 gift packs for the holidays. If he has a total of 28 lb 2 oz of candy, how much candy should he put in each pack?

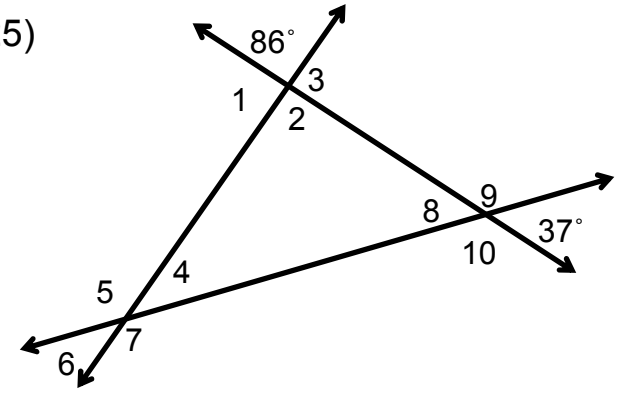
Solve the following:

23) To paint one room in a house with two coats of paint, Fard estimates that he needs 1 gal 3 qt of paint. If there are five rooms of similar size that need to be painted and the owner wants to have 1 gal 2 qt left over to use for "touch-up" jobs, how much paint will Fard need to get?

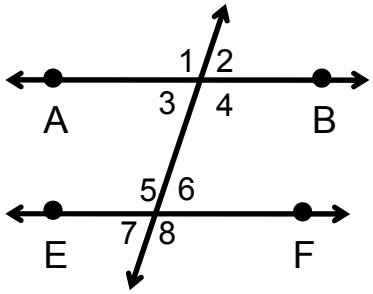
24) An oil spill pollutes 21 mi 3600 ft of coastline. Nine crews are organized to clean-up the coastline. How much coastline will each crew have to clean-up?

Find the indicated angles:

25)



Use the diagram below for exercise #26, assume $\overleftrightarrow{AB} \parallel \overleftrightarrow{EF}$.



26a) Identify all pairs of vertical angles.

26b) Identify all pairs of alternate interior angles.

26c) Identify all pairs of alternate exterior angles.

26d) Identify all pairs of corresponding angles.

26e) If m$\angle$ 6 = 72°, find the measure of all the other angles.

Find the complement (if possible) & supplement of the following:

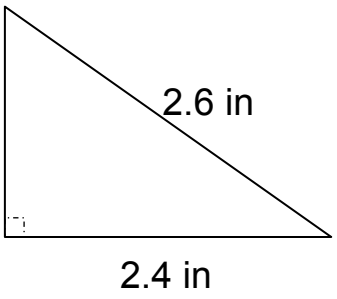
27a) 12.5° 27b) 85.6° 27c) 107°

Find the missing sides and angles:

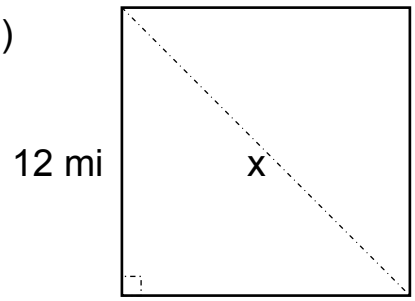
28) Given $\Delta ABC \sim \Delta DEF$, BC = 1.4 cm, EF = 2.1 cm, DF = 0.6 cm, AB = 1.2 cm, m$\angle$ D = 40.6°, and m$\angle$ E = 16.2°, find all the missing sides and angles.

Find x in the following diagrams:

29)

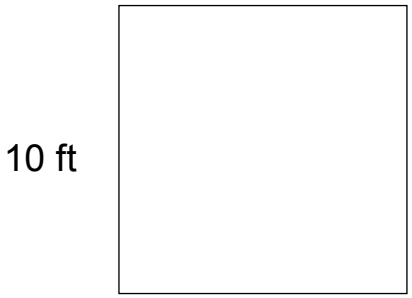


30)

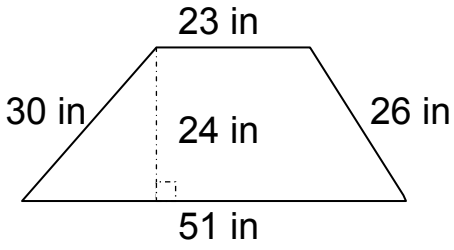


Solve the following geometry problems. For calculations involving π, give the exact answer and then approximate using π ≈ 3.14:

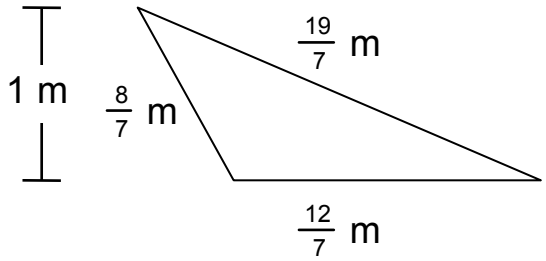
31) Find the perimeter and the area:



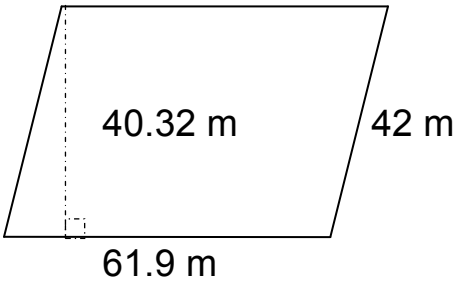
32) Find the perimeter and the area:



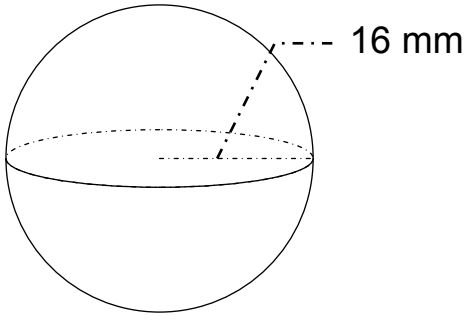
33) Find the perimeter and the area:



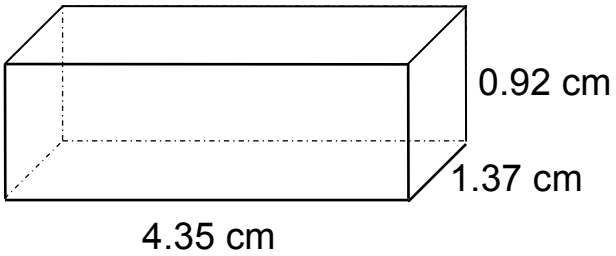
34) Find the perimeter and the area:



35) Find the volume:

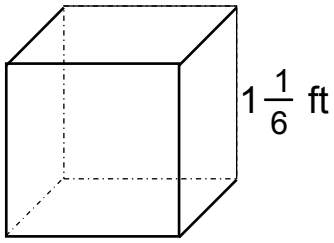


36) Find the volume:

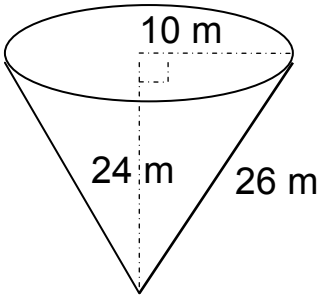


Solve the following geometry problems. For calculations involving π, give the exact answer and then approximate using π ≈ 3.14:

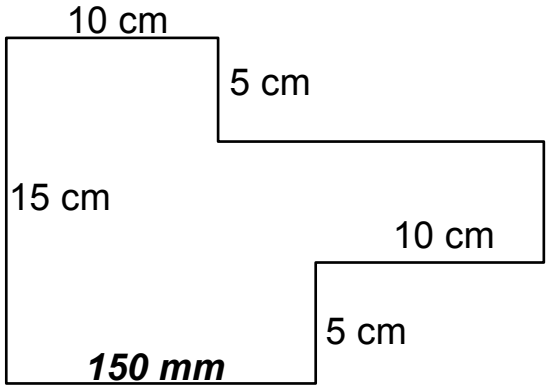
37) Find the volume:



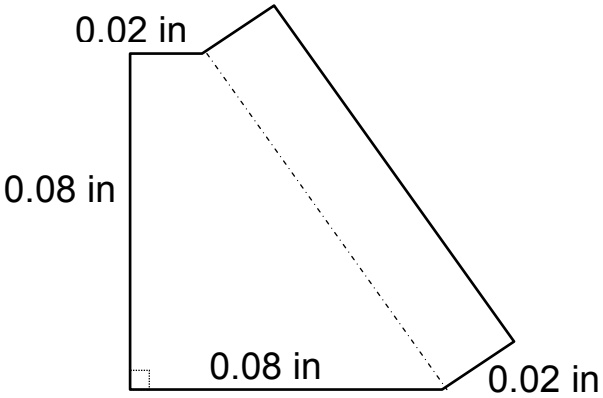
38) Find the volume:



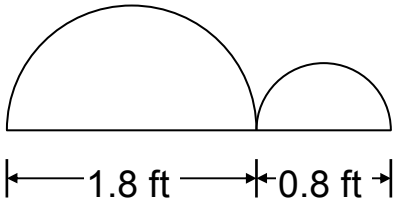
39) Find the perimeter and the area:



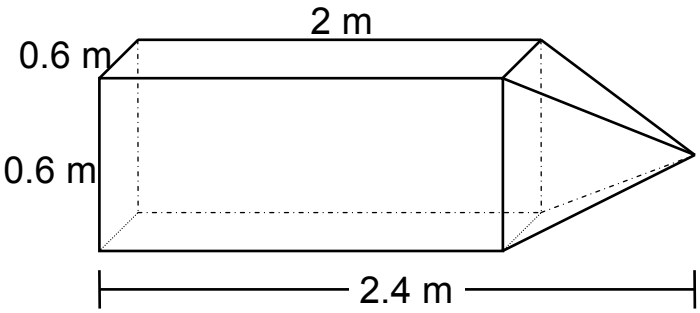
40) Find the perimeter and the area:



41) Find the perimeter and the area:

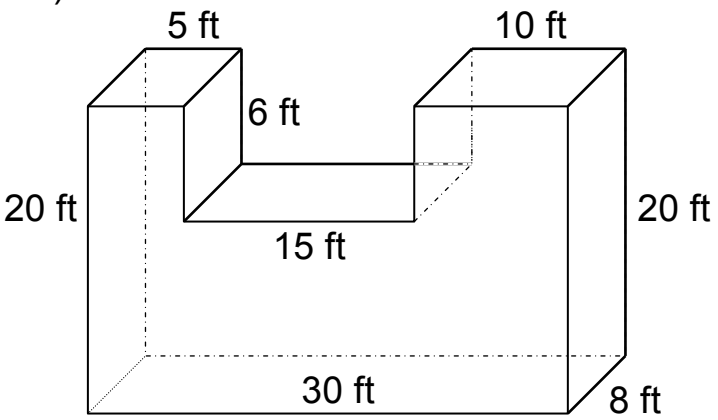


42) Find the volume:

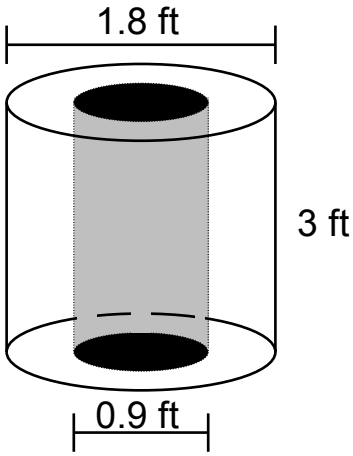


Solve the following geometry problems. For calculations involving π, give the exact answer and then approximate using π ≈ 3.14:

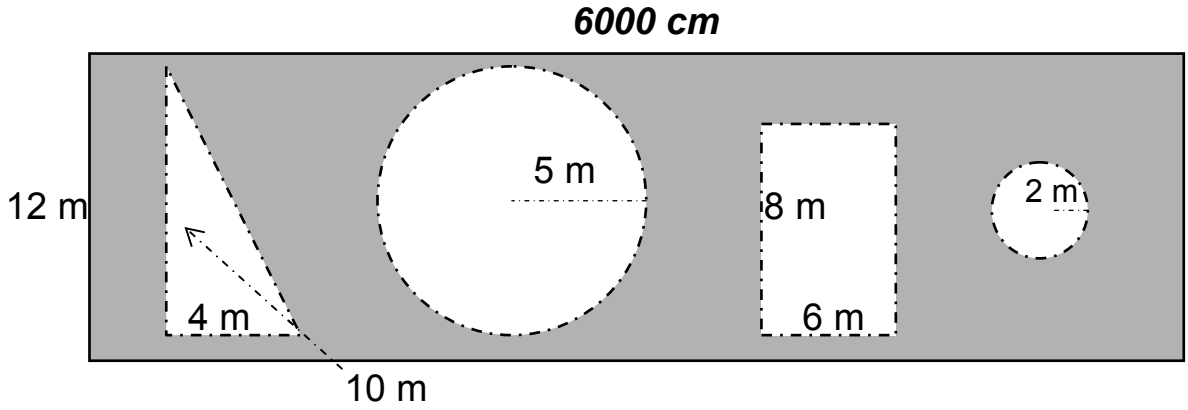
43) Find the volume:



44) Find the volume:



45) Find the area of the shaded region:



46) How much lemonade can a cone with radius of 5 cm and a height of 8 cm hold?

47) A family has a circular yard with a diameter of 200 yards.
   a) How much area does the family have to fertilize?
   b) If the wife wants to fence in the lawn, how much fencing is needed?

48) Benito Adobe wants to lay down a concrete floor that is 16 ft long, 15 ft wide, and 4 inches thick.
   a) How much concrete does he need to pour?
   b) If wants to put a six-foot high fence around the slab, how much fencing will he need?

49) Ramensis the second wants to build a pyramid that has a square base. The length of the side of the pyramid is to be 200 feet and it is to have a height of 300 feet. If each stone block measures ***12 inches*** by ***6 inches*** by ***6 inches***, how many blocks does Ramensis need to build his pyramid? (Assume the pyramid is solid).

50) a) The amount of soda needed to fill a soda can.

b) The amount of fencing needed to enclose a garden.

c) The amount of carpet needed for the living room.

d) The amount of medicine given to a child.

e) The amount of weather-stripping that goes around a window.

f) The amount of wrapping paper for Marigold's present.

g) The amount of concrete poured for a driveway.

h) The amount of water needed to fill a swimming pool.

i) The amount of grass needed to re-sod a lawn.

j) The amount of calk needed around a bathtub.

Answers:

1) 76.7 dam 2) 0.0652 dl 3) ≈ 16.536 pt 4) – 65˚ C 5) ≈ 805,000 cm

6) $\frac{77\text{g}}{3\text{ km}}$ 7) ≈ 0.001322 lb 8) $\frac{\$0.39}{\text{oz}}$ 9) 3 yd 1 ft 7 in 10) 54.68˚ F

11) ≈ $\frac{\$3.41}{\text{gal}}$ 12) 128 c 13) 19 mi 1721 ft 4 in 14) 14 days 19 hr 3598 sec

15) 1 ton 800 lb 10 oz 16) 63 gal 2c 17) ≈ 9 lb or ≈ $4\frac{1}{11}$ kg

18) 1 mi 2834 ft 4 in 19) 8451 m or 8.451 km 20) The engine size is ≈ 3.7 L.

21) Bobbi has 5 yd 2 ft 8 in of canvas left. 22) Each pack will get 1 lb 2 oz of candy.

23) He needs 10 gal 1 qt of paint. 24) Each crew will clean 2 mi 2160 ft of coast line.

25) m∠ 1 = 94˚; m∠ 2 = 86˚; m∠ 3 = 94˚; m∠ 4 = 57˚; m∠ 5 = 123˚;
m∠ 6 = 57˚; m∠ 7 = 123˚; m∠ 8 = 37˚; m∠ 9 = 143˚; m∠ 10 = 143˚

26a) ∠ 1 & ∠ 4; ∠ 2 & ∠ 3; ∠ 5 & ∠ 8; ∠ 6 & ∠ 7 26b) ∠ 3 & ∠ 6; ∠ 4 & ∠ 5

26c) ∠ 1 & ∠ 8; ∠ 2 & ∠ 7 26d) ∠ 1 & ∠ 5; ∠ 2 & ∠ 6; ∠ 3 & ∠ 7; ∠ 4 & ∠ 8

26e) m∠ 1 = m∠ 4 = m∠ 5 = m∠ 8 = 108˚; m∠ 2 = m∠ 3 = m∠ 7 = 72˚

27a) Comp. = 77.5˚; Supp. = 167.5˚ 27b) Comp. = 4.4˚, Supp. = 94.4˚

27c) No Comp.; Supp. = 73˚ 28) AC = 0.4 cm, DE = 1.8 cm, m∠ A = 40.6˚,
m∠ B = 16.2˚, m∠ C = 123.2˚, and m∠ F = 123.2˚

29) 1 in 30) ≈ 16.97 mi or ≈ 89,604.57 ft 31) P = 40 ft; A = 100 ft^2

32) P = 130 in; A = 888 in^2 33) P = $\frac{39}{7}$ m; A = $\frac{6}{7}$ m^2

34) P = 207.8 m; A = 2495.808 m^2 35) V = $\frac{16384}{3}\pi$ mm^3 ≈ 17,148.587 mm^3

36) V = 5.48274 cm^3 37) V = $\frac{343}{216}$ ft^3 38) V = 800π m^3 ≈ 2512 m^3

39) P = 80 cm, A = 250 cm^2 40) P = 0.32 in, A = 0.006 in^2

41) P = (1.3π + 2.6) ft ≈ 6.682 ft, A = 0.485π ft^2 ≈ 1.5229 ft^2 42) V = 0.768 m^3

43) V = 4080 ft^3 44) V = 1.8225π ft^3 ≈ 5.72265 ft^3 45) A = (652 – 29π) m^2 ≈ 560.94 m^2

46) V = $\frac{200}{3}\pi$ cm^3 ≈ $209\frac{1}{3}$ cm^3 47a) A = 10000π yd^2 ≈ 31,400 yd^2

47b) P = 200π yd ≈ 628 yd 48a) V = 80 ft^3 48b) 62 feet 49) 16,000,000 blocks

50a) Volume 50b) Perimeter 50c) Area 50d) Volume 50e) Perimeter

50f) Area 50g) Volume 50h) Volume 50i) Area 50j) Perimeter