Basic Math

Homework Packet #4

Due 5th Session

Homework Rules

All homework should be done in pencil and be legible.

(Unless stated otherwise)

All decimal answers are to be rounded to **three decimal places**.

All fraction answers are to be in **"lowest terms"**

When converting, you are expected to use **16ths.**

Show all work for the Homework

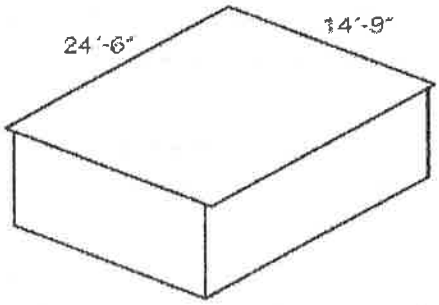
All answers will include **labels or unit of measurement** required in the question.

Name: _____ **Date:** _____

Area

Solve the following problems. Round decimal answers to the nearest hundredth.

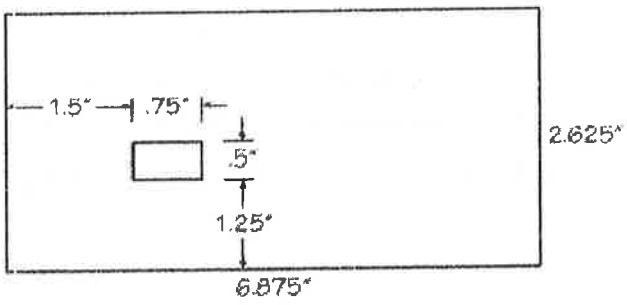
1. _____ A flat shed roof has a length of 24′-6″ and a width of 14′-9″. What is its area?



2. _____ If the roof framing in the problem above is sheathed with $\frac{5}{8}$″ thick sheets of 4 × 8 plywood, then how many whole sheets must be purchased to cover the roof, assuming no waste?

3. _____ On average, a roll of 30 lb. roofing felt covers 200 sq. ft. How many full rolls are required to cover the roof?

4. _____ A millwright is assigned to bore a hole into a piece of $\frac{1}{2}$″ steel stock. If the stock measures 2.625″ × 6.875″ then what is its area after the hole is machined?



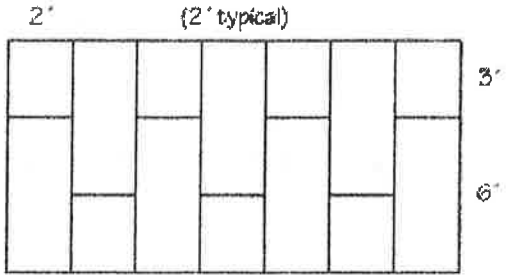
5. _____ Some $\frac{3}{4}$″ × 3 $\frac{1}{4}$″ × random length pieces of flooring are installed parallel with the long wall of a room measuring 21′-2 $\frac{3}{4}$″ × 14′-8 $\frac{1}{2}$″. What is the area of the room?

6. _____ In the problem above, if $\frac{1}{2}$" is needed for expansion at all the walls, then how many rows of flooring will be installed?

7. _____ If the cost of the carpet in the problem above is $14.95 per square yard, then what is the cost of the material needed?

8. _____ A countertop is needed for a custom-built island cabinet base unit. The cabinet base measures 39" × 54". If there is a 1" overhang on each side of the base unit, then what is the area of the countertop in square inches?

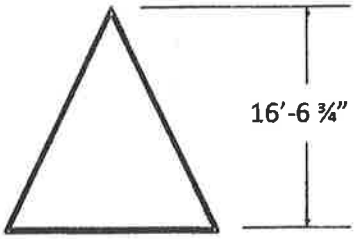
9. _____ Formwork is set in place for a pour. The configuration of the panels is shown below. How many square feet of formwork are used?



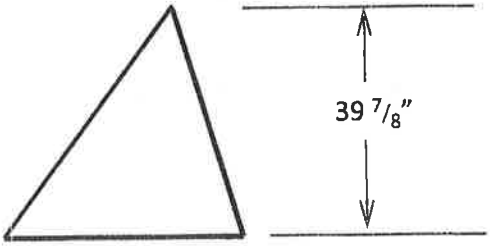
10. _____ What is the area of a room that measures 22′-8 $\frac{1}{2}$" × 16′-11 $\frac{1}{4}$"?

11. _____ A wall of a room is 26′ long and 9′-0" tall. If the wall has a 3′ × 7′ door opening and a 4′ × 4′ window opening, then how many 4′ × 9′ pieces of sheetrock are required to drywall the wall? Do not figure waste and round up to the next whole sheet of drywall.

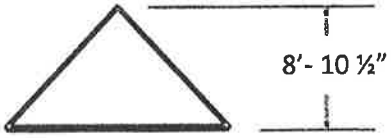
12. _____ A UBC member builds a wood fence 4′-6" high. 1 × 6s are used as pickets spaced 1 $\frac{1}{2}$" apart. If there are no gates in this portion of fence, then how many square feet of fence are actually covered by 1 x 6 material if the fence is 33′-8 $\frac{1}{2}$" in length? The 1 × 6 measures $\frac{3}{4}$" × 5 $\frac{1}{2}$



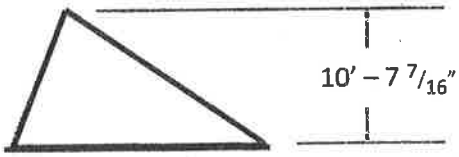
15'-3 ½ "



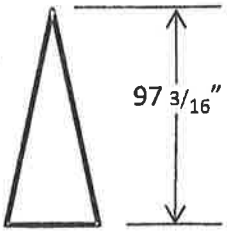
46 13/16"



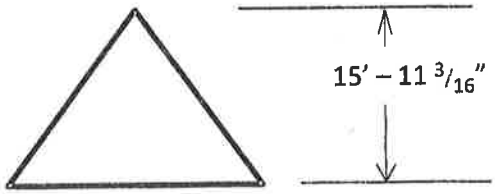
12'- 8 ¼"



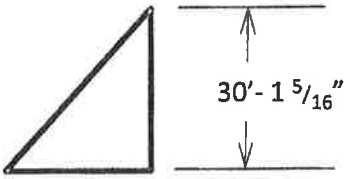
21' – 10 1/8"



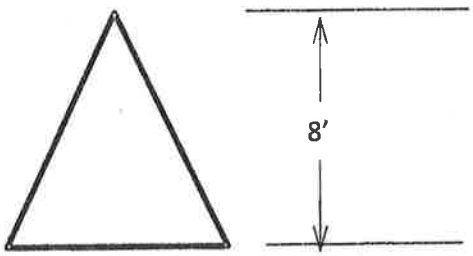
48 11/16"



48 11/16"



22' – 11"



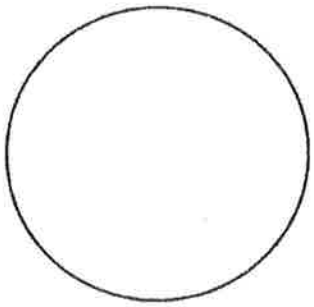
7'

Name: _____ **Date:** _____

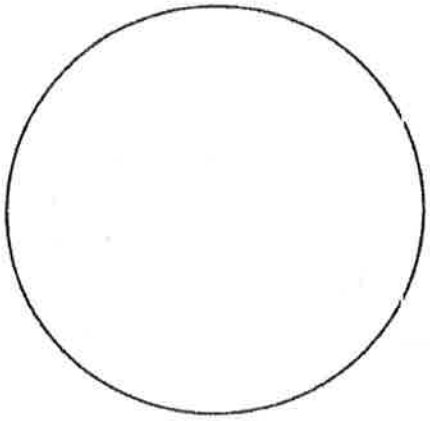
Area of Circles

Calculate the area of each of the circles shown. Round answers to the nearest hundredth.

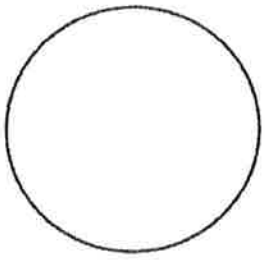
1. r = 7″ Area = _____



2. d = 12′-6″ Area = _____



3. d = 3′ Area = _____



Basic Math Terms

Due 5th Session

1. Area

2. Centimeter

3. Meter

4. Pitch

5. Run

6. Span

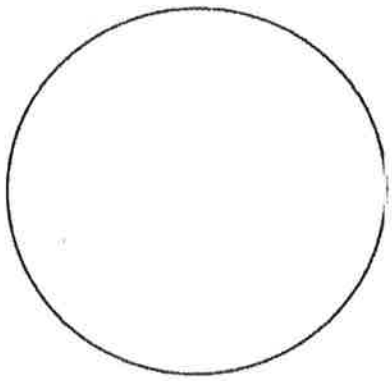
7. Subtraction

8. Square Feet

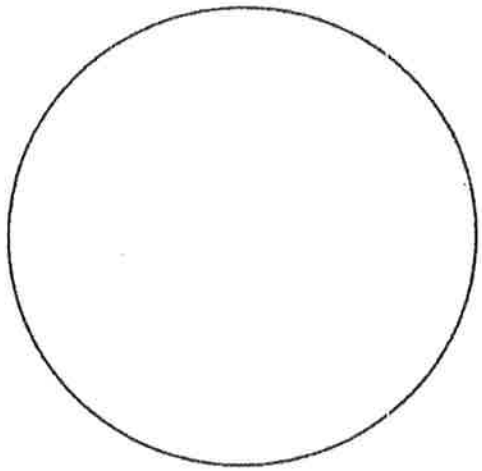
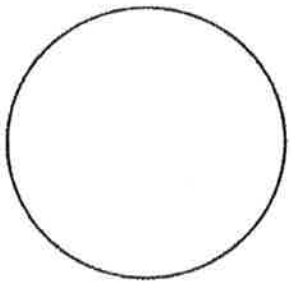
9. Square Root

10. Yard

4. $r = 14\frac{1}{4}''$ Area = _____



5. $d = 13'\text{-}3''$ Area = _____



6. $r = 150'$ Area = _____