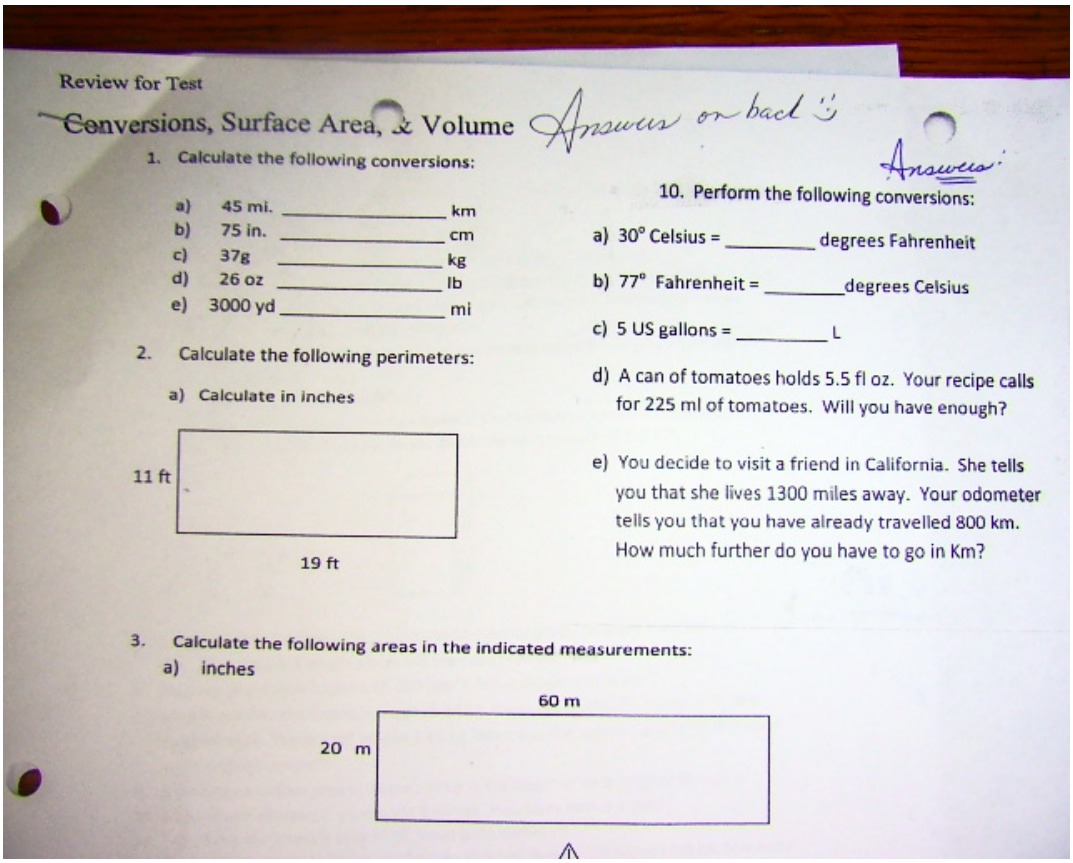


Review for Test

Conversions, Surface Area, & Volume Answers on back :)

1. Calculate the following conversions:

a) 45 mi. _____ km
b) 75 in. _____ cm
c) 37g _____ kg
d) 26 oz _____ lb
e) 3000 yd _____ mi

2. Calculate the following perimeters:

a) Calculate in inches

11 ft

19 ft

3. Calculate the following areas in the indicated measurements:

a) inches

60 m

20 m

Answers:

10. Perform the following conversions:

a) 30° Celsius = _____ degrees Fahrenheit

b) 77° Fahrenheit = _____degrees Celsius

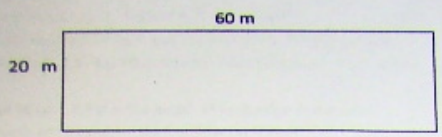
c) 5 US gallons = _____ L

d) A can of tomatoes holds 5.5 fl oz. Your recipe calls for 225 ml of tomatoes. Will you have enough?

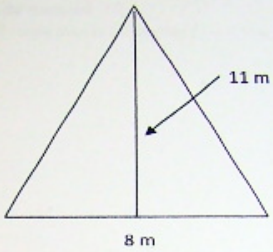
e) You decide to visit a friend in California. She tells you that she lives 1300 miles away. Your odometer tells you that you have already travelled 800 km. How much further do you have to go in Km?

3. Calculate the following areas in the indicated measurements:

a) inches

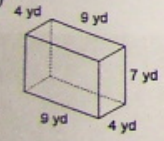


b) feet

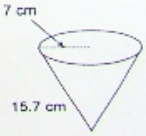


Find the surface area of each figure. Round to the nearest tenth.

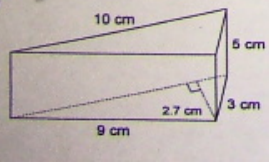
1)



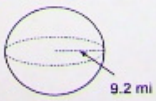
2)



3)

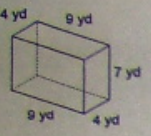


4)

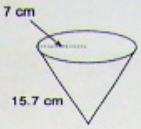


Find the surface area of each figure. Round to the nearest tenth.

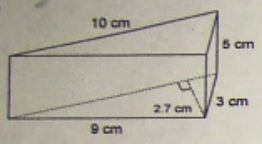
1)



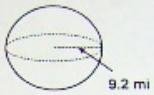
2)



3)

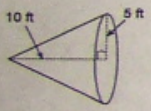


4)

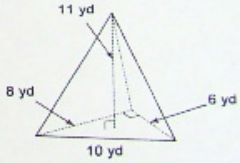


Find the volume of each figure. Round to the nearest tenth.

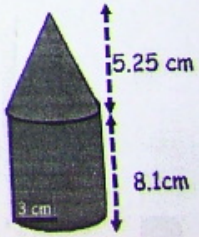
5)



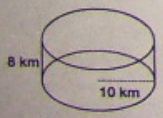
6)



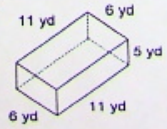
9. Determine the volume

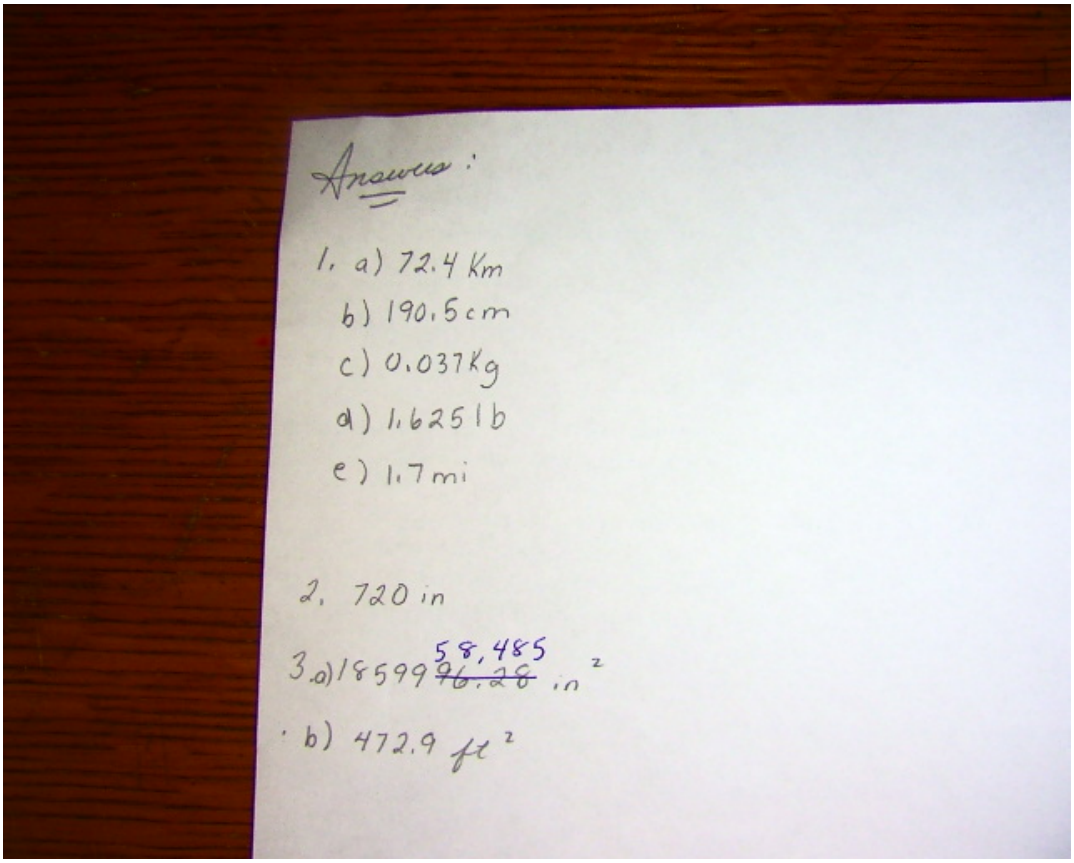


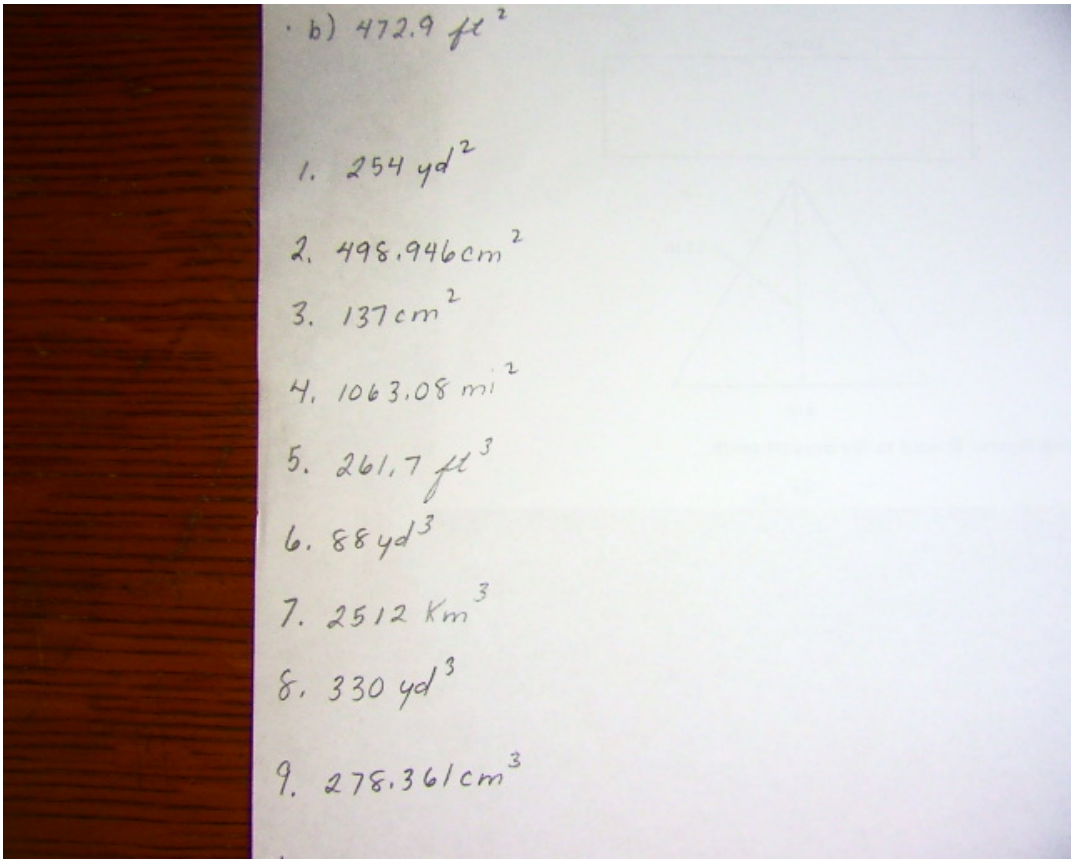
7)

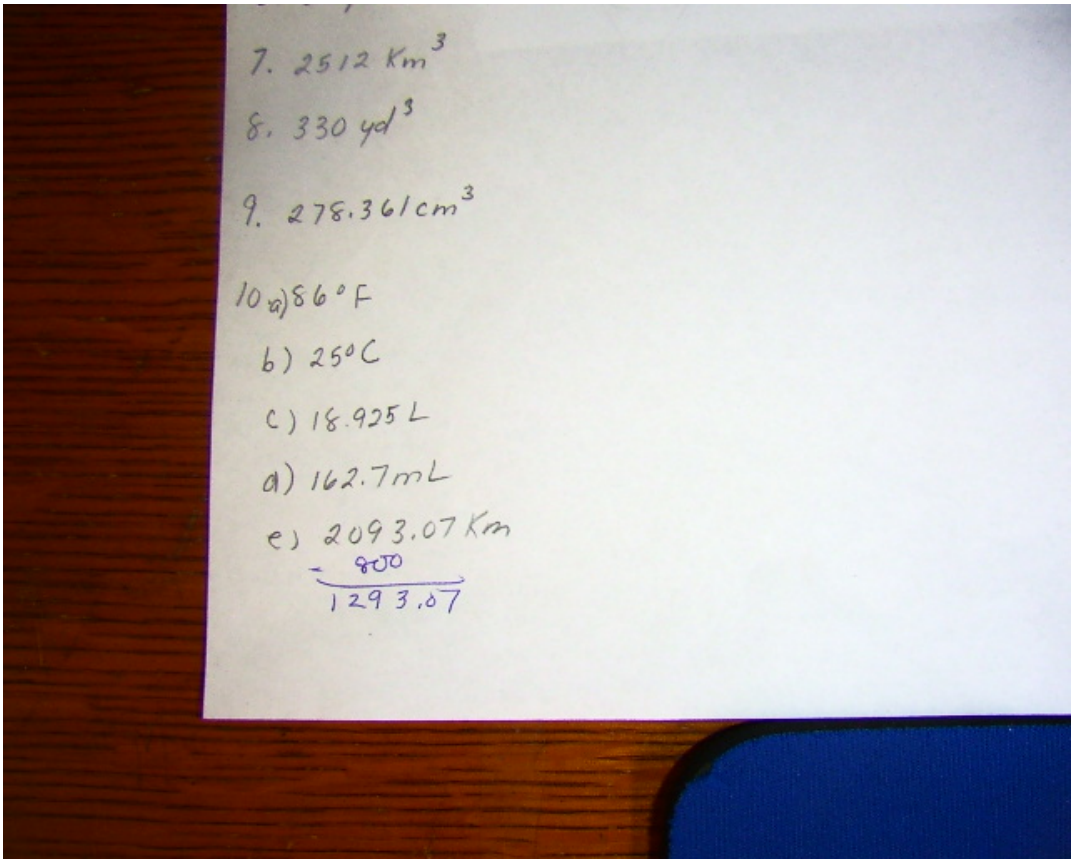


8)



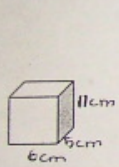

Answers:
1. a) 72.4 Km
b) 190.5 cm
c) 0.037 Kg
d) 1.625 lb
e) 1.7 mi
2. 720 in
3. a) 18599 58,485 76.28 in²
b) 472.9 ft²

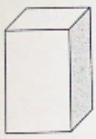

b) 472.9 ft^2
1. 254 yd^2
2. 498.946 cm^2
3. 137 cm^2
4. 1063.08 mi^2
5. 261.7 ft^3
6. 88 yd^3
7. 2512 Km^3
8. 330 yd^3
9. 278.361 cm^3


7. 2512 Km3
8. 330 yd3
9. 278.361 cm3
10 a) 86°F
b) 25°C
c) 18.925 L
d) 162.7 mL
e) 2093.07 Km
800
1293.07

GMF Review #2

1. A jet is flying at 28 000 ft, how many metres is this?
2. A cone shaped pile of road salt is covered with tarps to keep it dry. The radius of the base of the pile is 10.5m and height is 8.2m.
   a. Calculate the volume of the salt in the pile.
   b. Allowing 15% extra for overlap, what is the area of the tarpaulins?
3. A toonie ($2 coin) has a 28mm diameter. The outer ring is made of a nickel alloy. The inner core has a diameter of 16mm and is made of a copper alloy. The thickness of the coin is 1.8mm. Calculate the volume of the nickel alloy in the coin.
4. The surface area of a softball is about 118 cm^2 greater than the surface area of a baseball. The radius of a baseball is 3.7 cm.
   a. What is the radius of a softball?
   b. How many times greater is the volume of a softball than the volume of a baseball?
5. If you double the height of a prism, do you double the surface area? PROVE IT!!



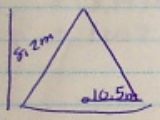


6. A rope is 5 feet 8 inches long. It needs to be cut into pieces that are 6 inches long. How many full length pieces will the rope provide?
7. The area of a picture frame is 65 000 mm^2? What would it be in cm^2?
8. A water saturated soil sample weighs 2.54 kg. It was allowed to dry completely and weighed again. The dry soil weighs 1.97 kg. What was the mass (in grams) of the water in the original sample?
9. A cube has a surface area of 96 cm^2. What is the length of each edge of the cube?
10. A baby is born weighing 7 pounds and 8 ounces. How many ounces is that?
11. The volume of a sphere is 2143.57 ft^3. What is the diameter?
12. The directions on a box of chicken wings says to set my oven to 218 degrees Celsius, how many degrees Fahrenheit is that?

1. 28000 ft = 8534.5 m

$28000 \times \frac{1}{3.2808}$

8534.5 m

2. 

$V = \frac{A_{base} \times ht}{3}$

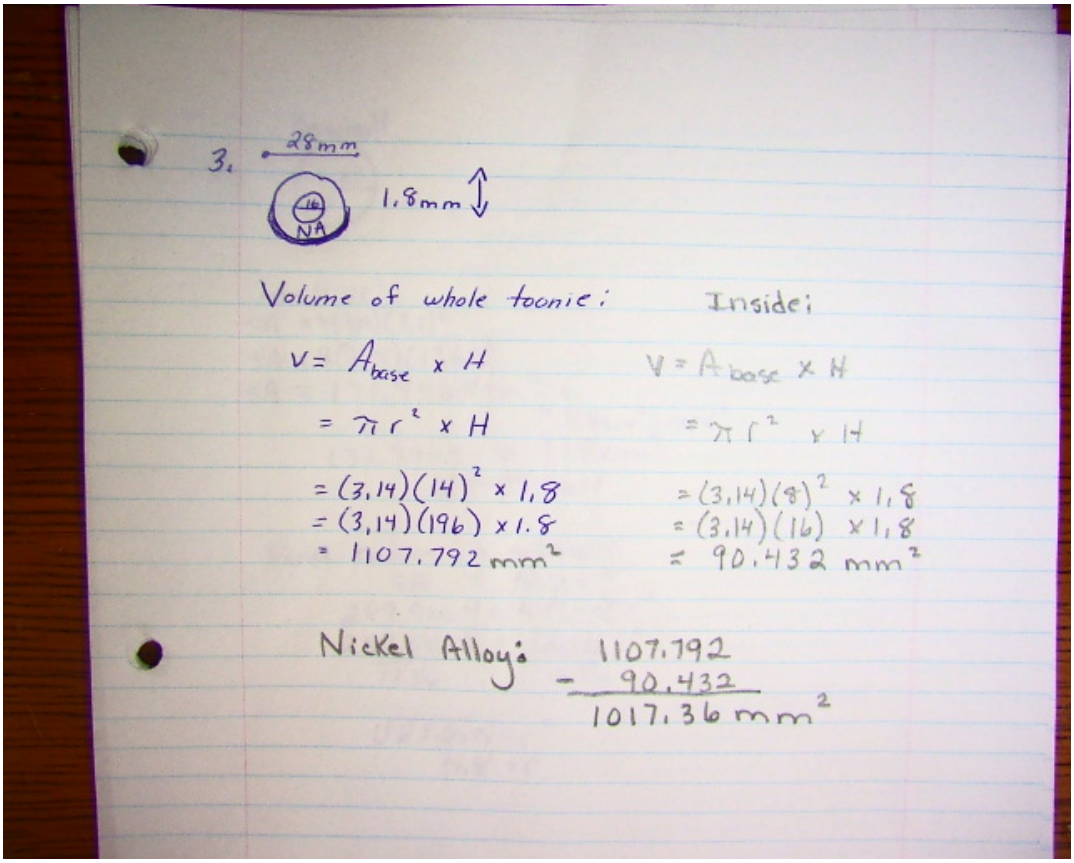
$= \frac{\pi r^2 \times ht}{3}$

$= \frac{(3.14)(10.5)^2 \times 8.2}{3}$

$= \frac{(3.14)(110.25) \times 8.2}{3}$

$= \frac{2838.717}{3}$

$= 946.24$



3. 28mm

1.8mm

NA

Volume of whole toonie:

$V = A_{base} \times H$

$= \pi r^2 \times H$

$= (3,14)(14)^2 \times 1,8$

$= (3,14)(196) \times 1.8$

$= 1107.792\ mm^2$

Inside:

$V = A_{base} \times H$

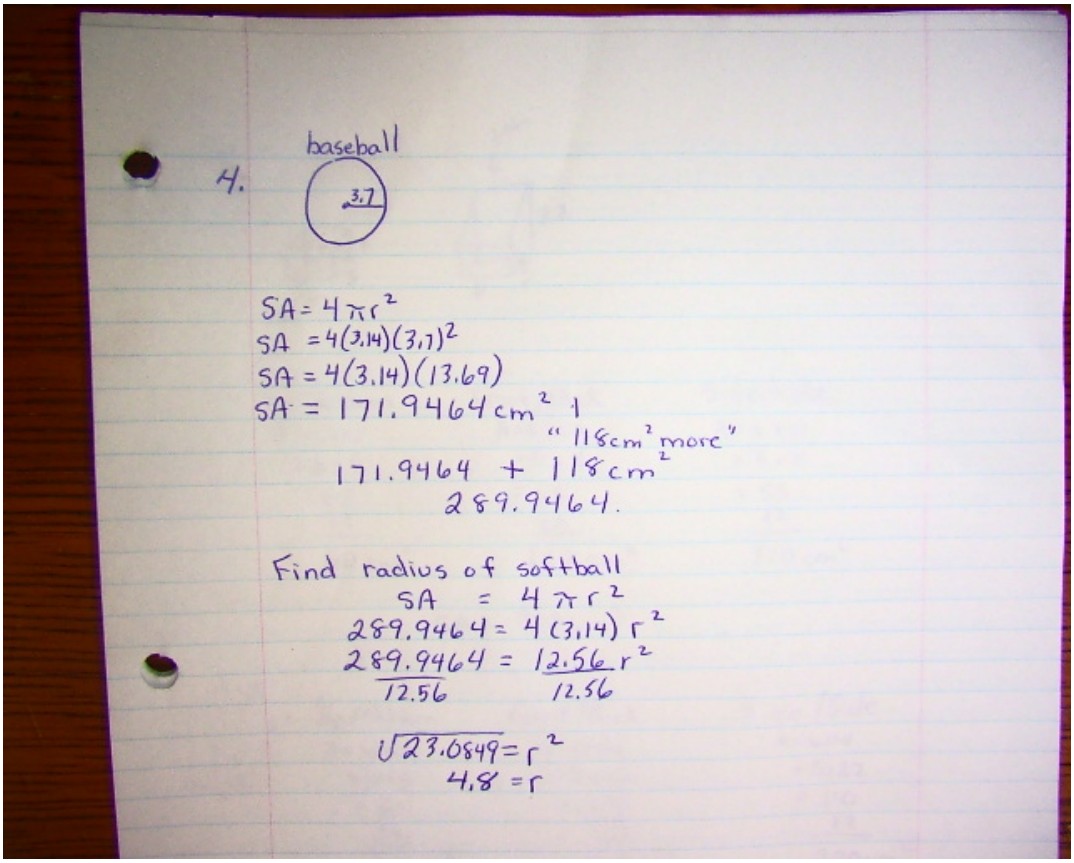
$= \pi r^2 \times H$

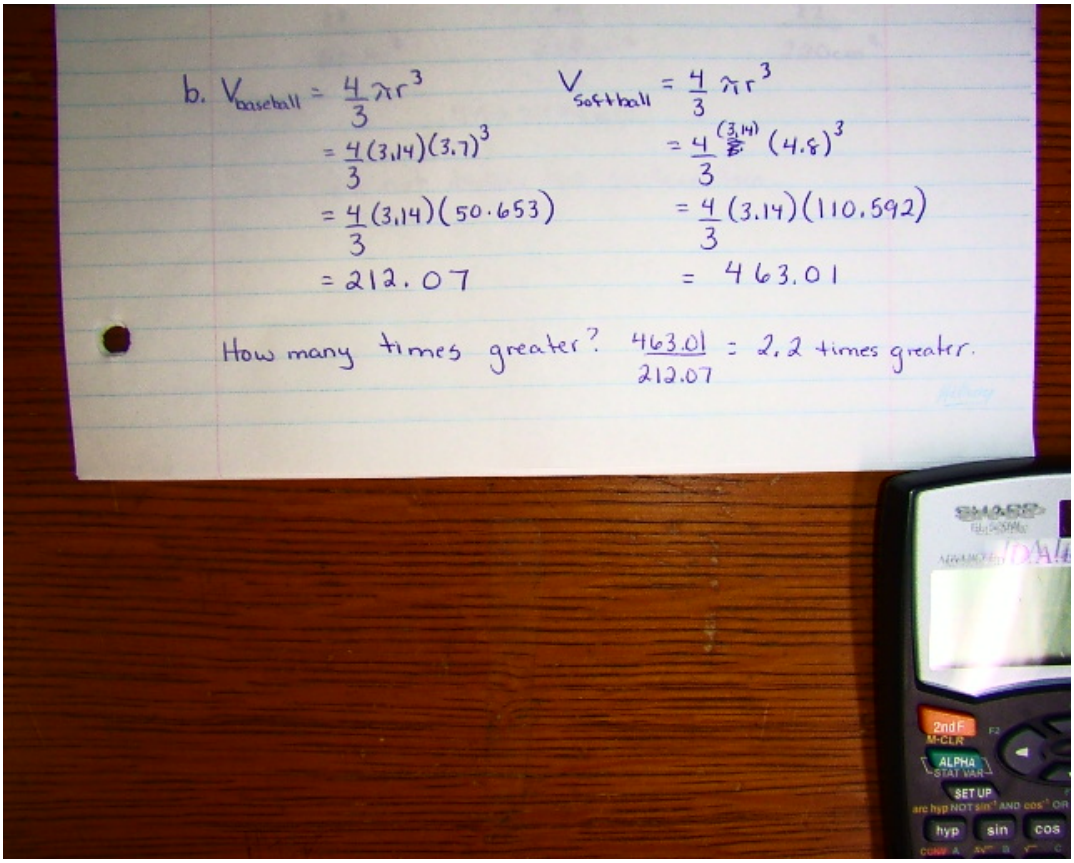
$= (3,14)(8)^2 \times 1,8$

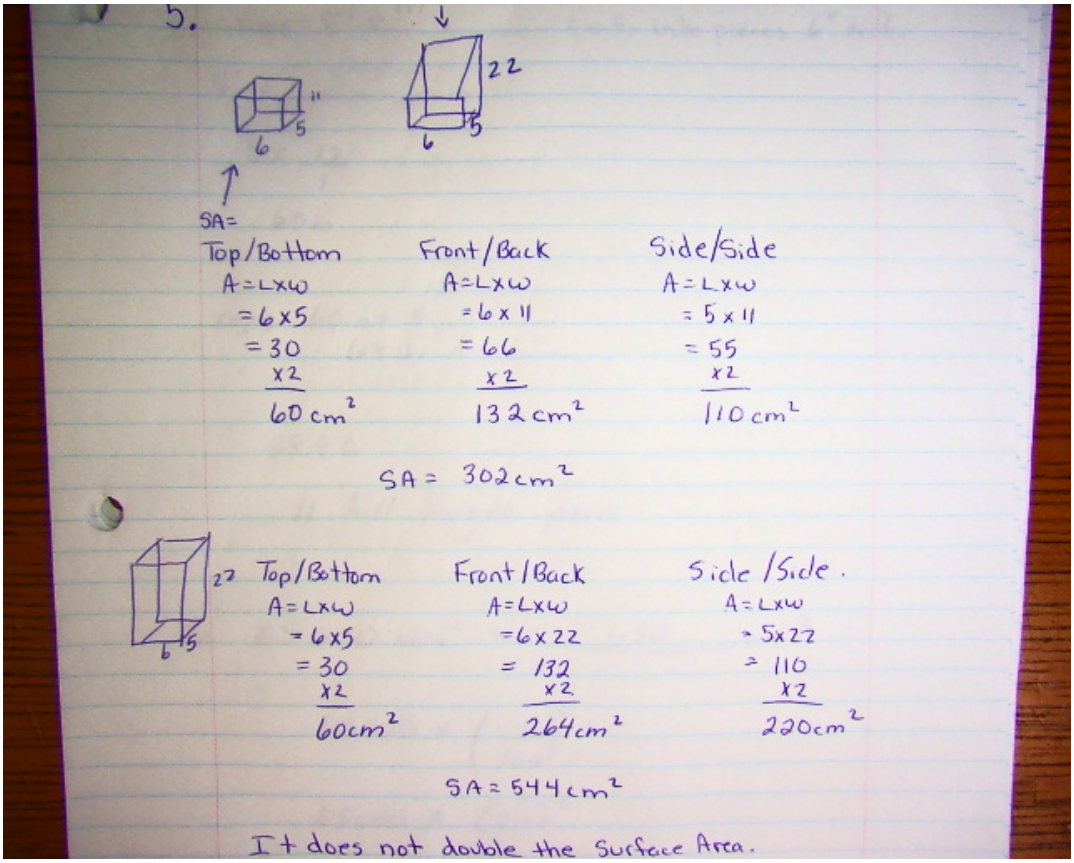
$= (3,14)(16) \times 1,8$

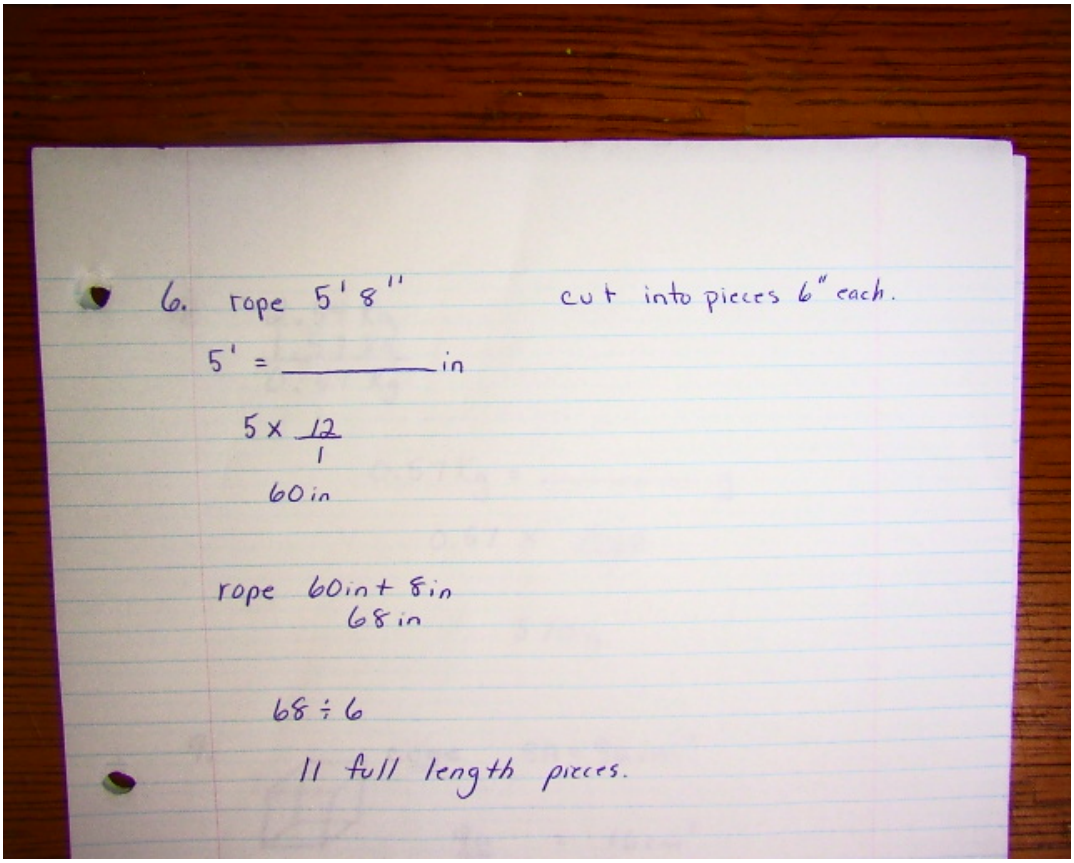
$= 90.432\ mm^2$

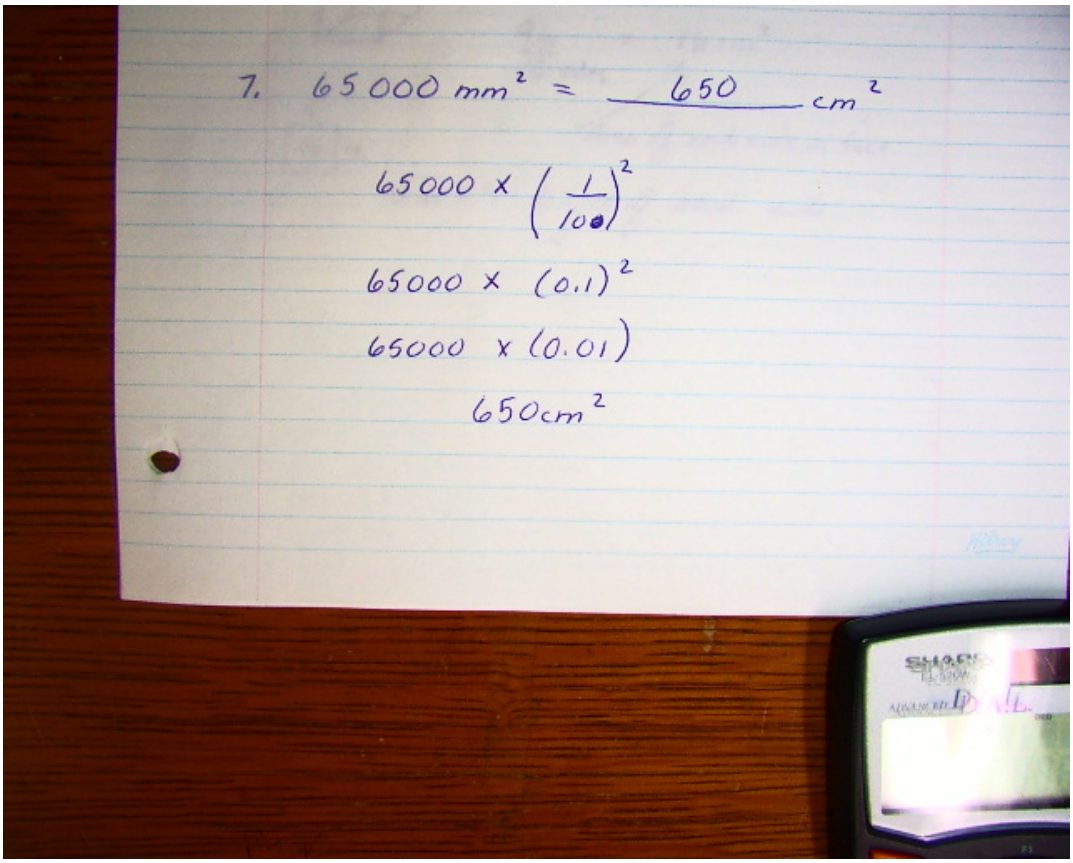
Nickel Alloy: $1107.792 - 90.432 = 1017.36\ mm^2$

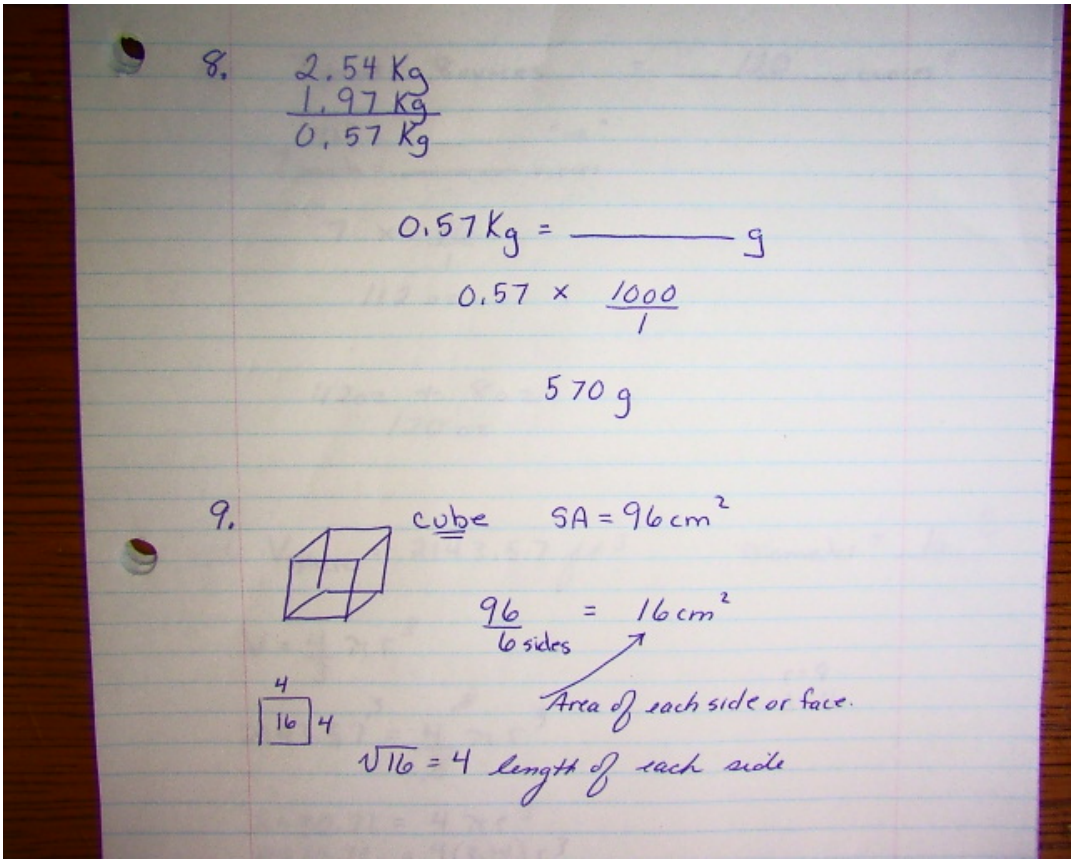

4.
baseball
3.7
SA = 4πr²
SA = 4(3.14)(3.7)²
SA = 4(3.14)(13.69)
SA = 171.9464 cm²
"118cm² more"
171.9464 + 118cm²
289.9464.
Find radius of softball
SA = 4πr²
289.9464 = 4(3.14)r²
289.9464 = 12.56r²
12.56 12.56
√23.0849 = r²
4.8 = r

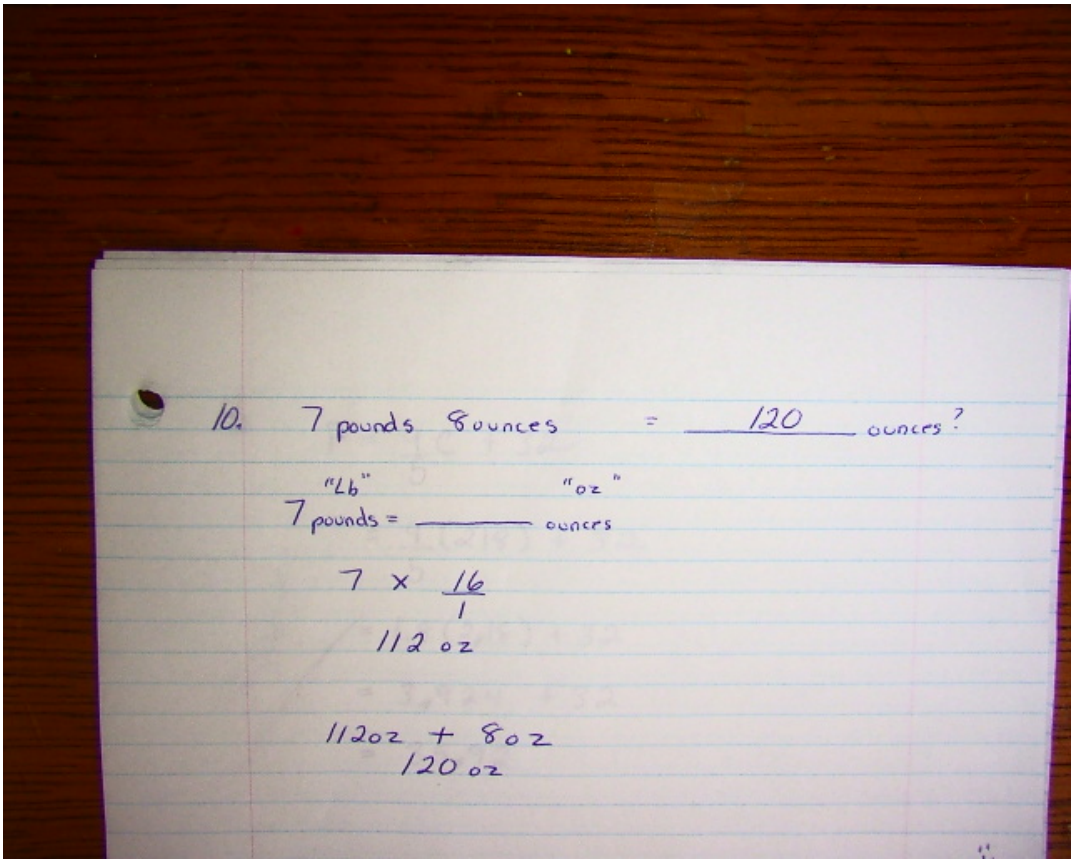

b. $V_{baseball} = \frac{4}{3}\pi r^3$
$= \frac{4}{3}(3.14)(3.7)^3$
$= \frac{4}{3}(3.14)(50.653)$
$= 212.07$
$V_{softball} = \frac{4}{3}\pi r^3$
$= \frac{4}{3}(3.14)(4.8)^3$
$= \frac{4}{3}(3.14)(110.592)$
$= 463.01$
How many times greater? $\frac{463.01}{212.07} = 2.2$ times greater.
2nd F
M-CLR
ALPHA
STAT VAR
SET UP
hyp
sin
cos

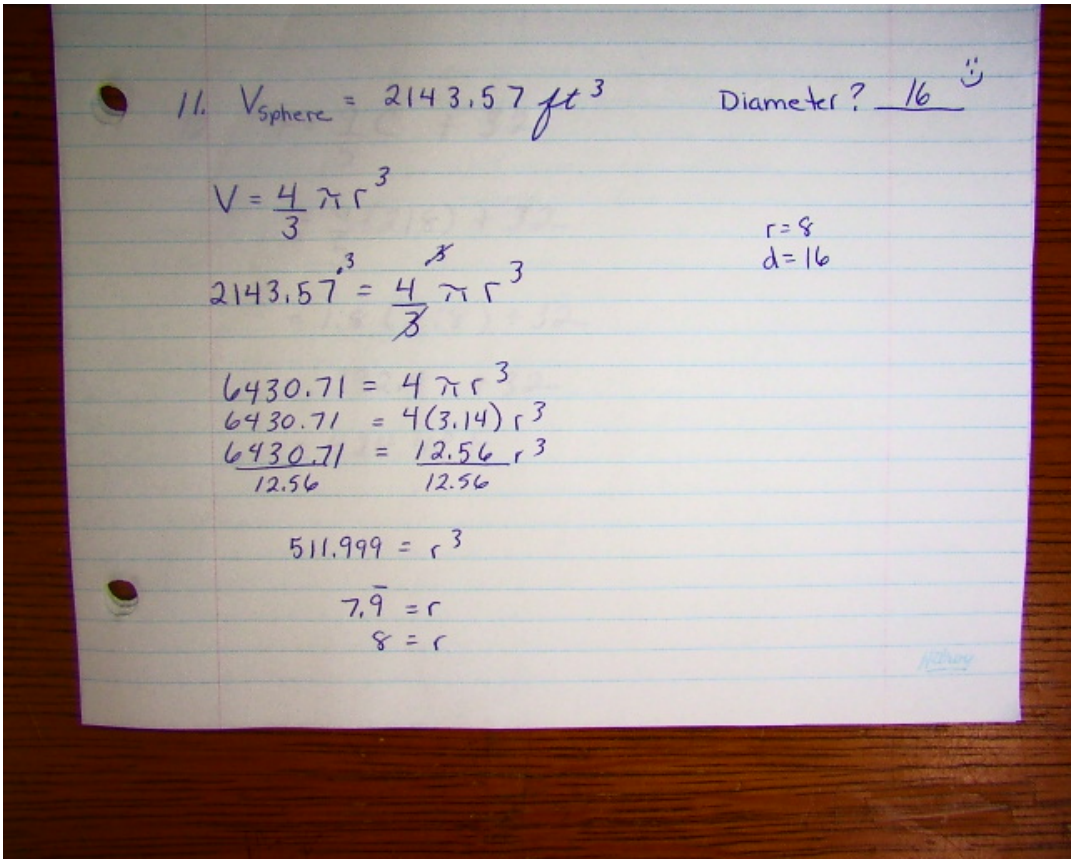

5.
11
5
6
22
5
6
SA=
Top/Bottom
A=LxW
=6x5
=30
x2
60 cm²
Front/Back
A=LxW
=6x11
=66
x2
132 cm²
Side/Side
A=LxW
=5x11
=55
x2
110 cm²
SA= 302cm²
22
5
6
Top/Bottom
A=LxW
=6x5
=30
x2
60cm²
Front/Back
A=LxW
=6x22
=132
x2
264cm²
Side/Side.
A=LxW
=5x22
=110
x2
220cm²
SA=544cm²
It does not double the Surface Area.

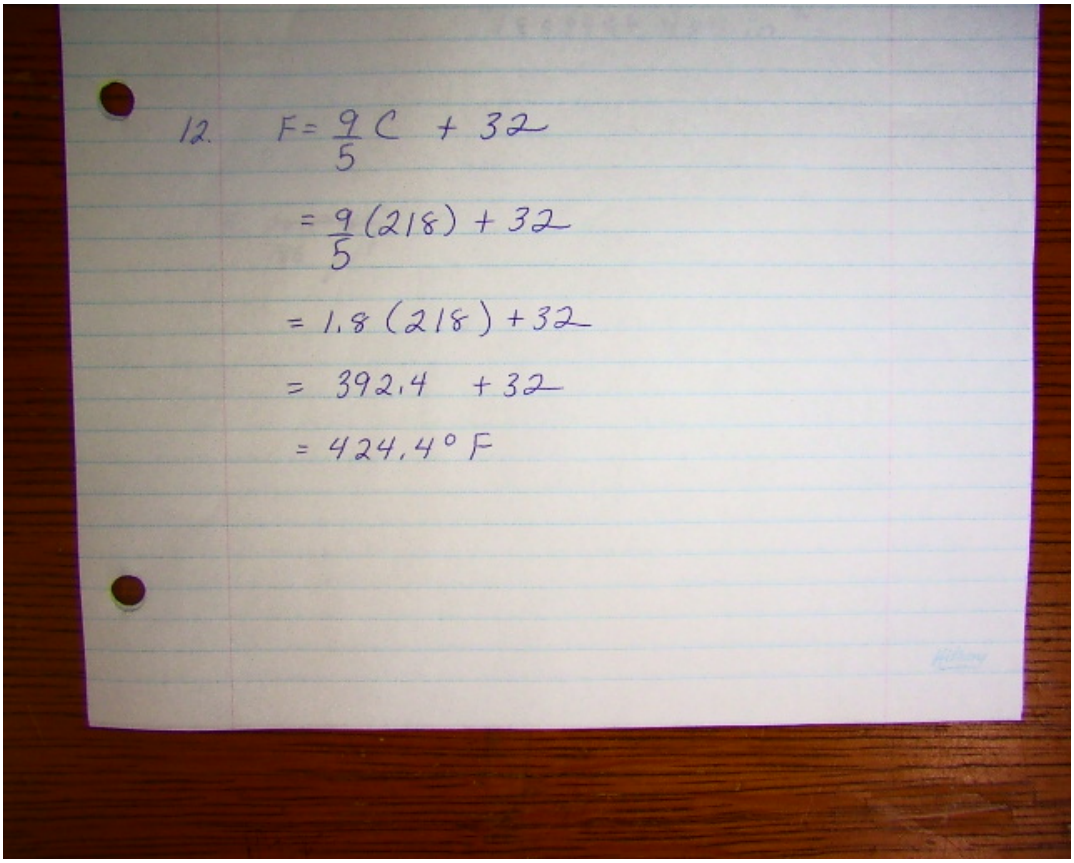

6. rope 5' 8" cut into pieces 6" each.
5' = _____ in
5 x 12/1
60 in
rope 60in + 8in
68 in
68 ÷ 6
11 full length pieces.


7. 65000 mm² = 650 cm²
65000 × (1/100)²
65000 × (0.1)²
65000 × (0.01)
650cm²


8.
2.54 Kg
1.97 Kg
0.57 Kg
0.57 Kg = _____ g
0.57 × 1000/1
570 g
9.
cube
SA = 96 cm²
96/6 sides = 16 cm²
Area of each side or face.
4
16
4
√16 = 4 length of each side


10. 7 pounds 8 ounces = 120 ounces?
"Lb" "oz"
7 pounds = ____ ounces
7 x 16/1
112 oz
112oz + 8oz
120 oz


11. $V_{sphere} = 2143.57\ ft^3$
Diameter? 16
$V = \frac{4}{3}\pi r^3$
$r = 8$
$d = 16$
$2143.57 = \frac{4}{3}\pi r^3$
$6430.71 = 4\pi r^3$
$6430.71 = 4(3.14)r^3$
$\frac{6430.71}{12.56} = \frac{12.56}{12.56}r^3$
$511.999 = r^3$
$7.\bar{9} = r$
$8 = r$


12. $F = \frac{9}{5}C + 32$
$= \frac{9}{5}(218) + 32$
$= 1.8(218) + 32$
$= 392.4 + 32$
$= 424.4°F$