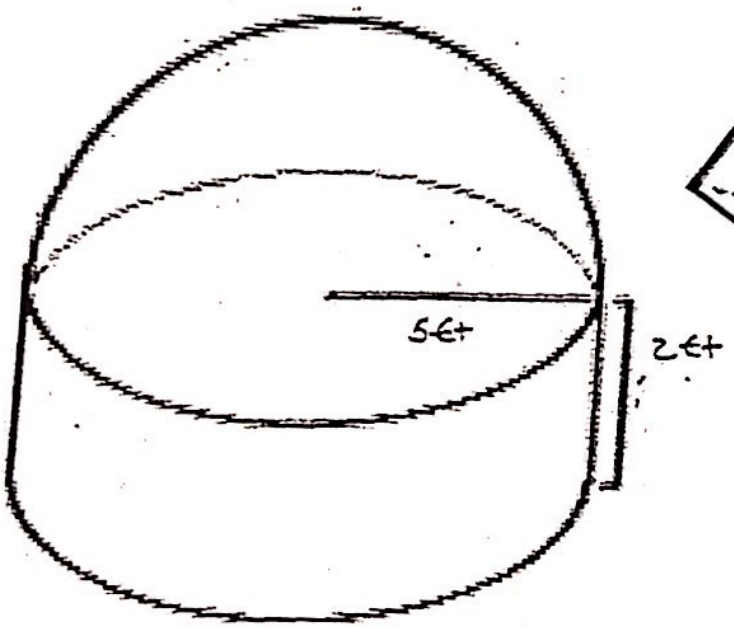
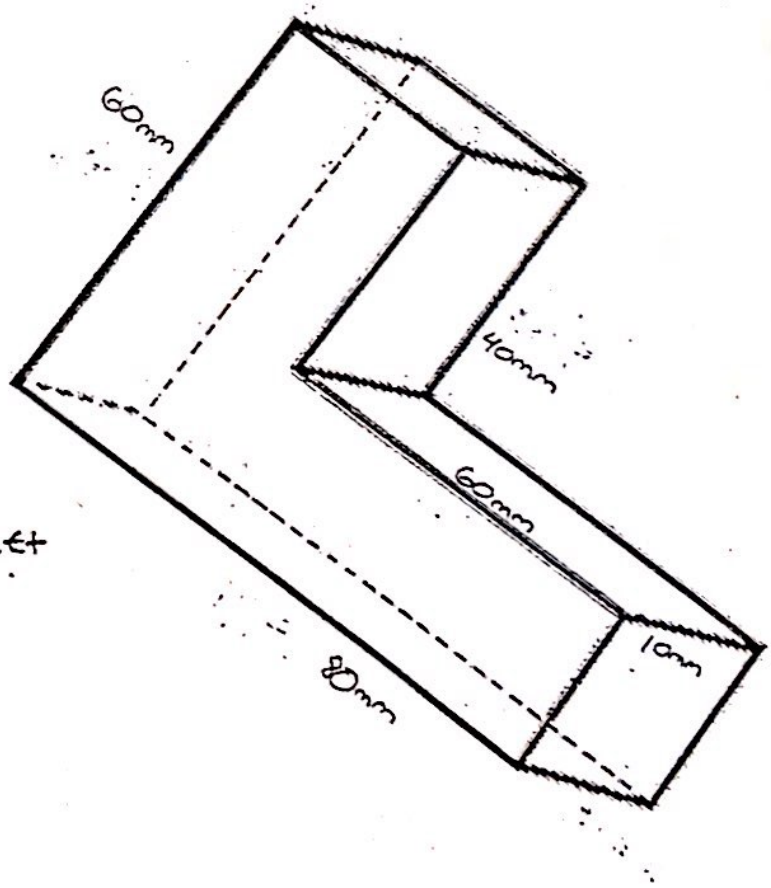
Challenge Volume Problems

1) A bed of mulch is $8.00 per cubic yard. If you want to mulch your flower beds that are 12 feet by 12 feet by 3 inches, then how much will it cost you?

2) What is the maximum possible volume of a sphere that can fit into a cube that measures 6 feet on each side?

3) Find the total area of each shape below:





1 yard = 36 in

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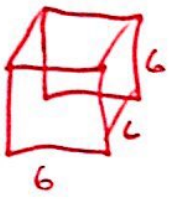
1) A bed of mulch is $8.00 per cubic yard. If you want to mulch your flower beds that are 12 feet by 12 feet by 3 inches, then how much will it cost you?

4 yards 4 yards 1/12 yard

1.3 cubic yard

$(8.00)(1.3) = \$10.67$

2) What is the maximum possible volume of a sphere that can fit into a cube that measures 6 feet on each side?



$d = 6ft$

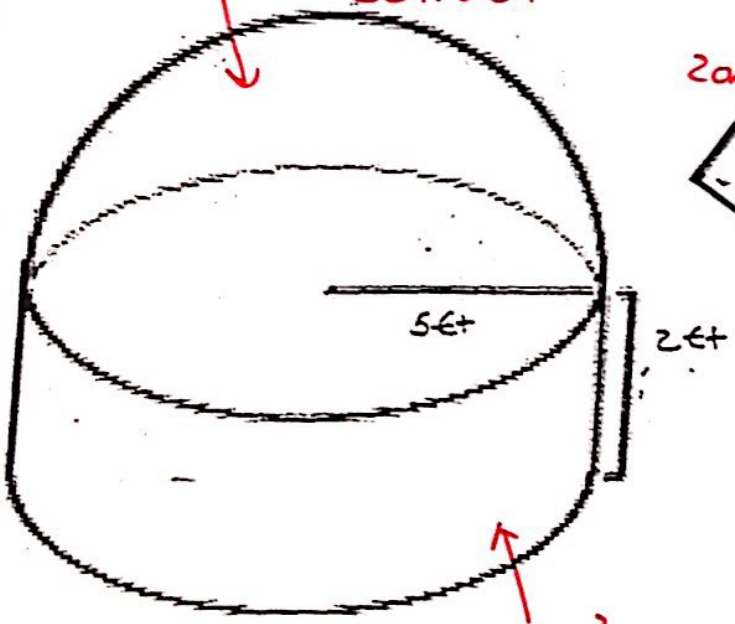
$\frac{4}{3}\pi(3)^3$

$113.1 ft^3$

3) Find the total area of each shape below:

$V = \frac{1}{2} \cdot \frac{4}{3}\pi(5)^3$

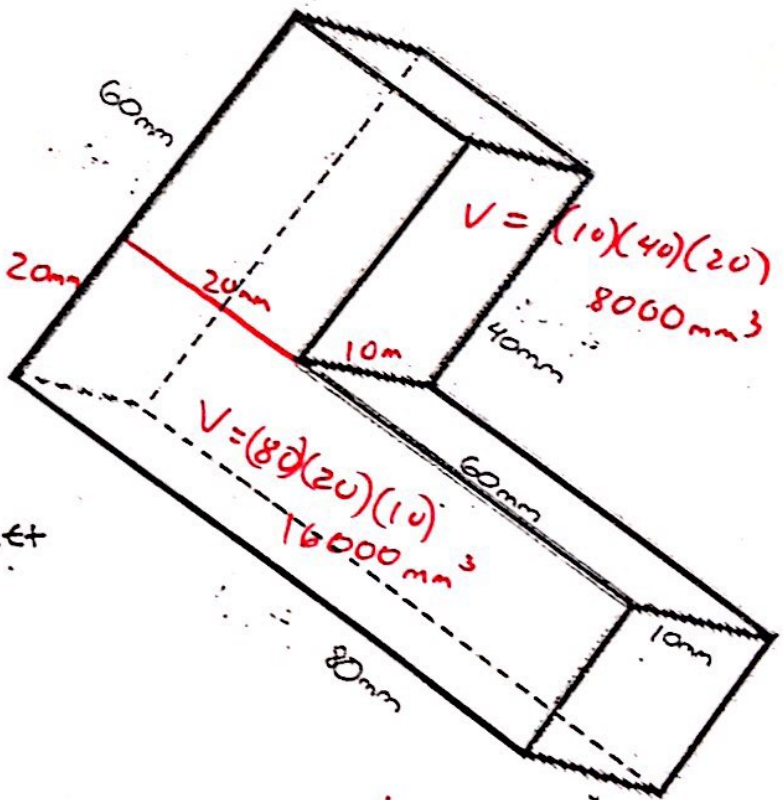
$261.8 ft^3$



$261.8 + 157.1 = 418.9 ft^3$

$\pi(5)^2 \cdot 2$

$157.1 ft^3$



$V = (10)(40)(20)$

$8000 mm^3$

$V = (80)(20)(10)$

$16000 mm^3$

$16000 + 8000 = 24000 mm^3$