| Geometry, Measurement and Finance                         | 10 Name:                                     |            |
|---|--|------------|
| VI) Unit Test - Systems of Measurement &                  | z Conversions                                | Sept. 2015 |
| ALLEL   |  | -          |
| Multiple Choice (15 Marks)                                |  |            |
| Shade in the letter that corresponds to the correct solut | tion on the scantron sheet that is provided. |            |
| 1. How more inches is CI5"?                               |  |            |
| 1. How many mones is 0.5 ?                                |  |            |

| A) 72"   | B) 77"   | C) 78"   | D) 84"                           |
|--|--|--|----------------------------------|
| 2. What is the perimeter of a re<br>A) 60 ft         | ectangular room that has a length B) 48 ft                             | of 18 ft and width that is 6 feet lo<br>C) 216 ft    | ess than the length?<br>D) 72 ft |
| 3. Convert 5000 inches into ya                       | rds.   |  |                                  |
| A) 1666.7 yards                                      | B) 416.7 yards   | C) 138.9 yards                                       | D) 128.2 yards                   |
| 4. Convert 116 inches into feet                      | and inches.  |  |                                  |
| A) 9 feet 6 inches                                   | B) 9 feet 7 inches   | C) 9 feet 8 inches                                   | D) 9 feet 9 inches               |
| 5. Which of the following are t A) centimeters       | he <b>most appropriate imperial</b> u<br>B) millimeters                | <b>units</b> to use for measuring the wid<br>C) feet | dth of a textbook?<br>D) inches  |
| 6 How many inches are there i                        | in 10 centimeters?   |  |                                  |
| A) 3.3 in  | B) 3.9 in  | C) 5.0 in  | D) 25.4 in                       |
| 7. An American fisherman is w approximately 485 kmwh | ondering how far it is from Mira<br>at would this distance be in miles | michi to Halifax, Nova Scotia.                       | You know that it is              |
| A) 780.5 miles                                       | B) 530.4 miles   | C) 301.4 miles                                       | D) 443.5 miles                   |
| 8. What is the surface area of a                     | cube that measures 12" on each   | side?  |                                  |
| A) 1728 in <sup>2</sup>                              | B) 864 in <sup>2</sup>   | C) 144 in <sup>2</sup>                               | D) 72 in <sup>2</sup>            |
| 9. An aluminum juice can mea                         | sures 4.5 inches high and has a ra                                     | adius of 1.2 inches. What is the s                   | urface area of the can?          |
| A) 42.98 in <sup>2</sup>                             | B) 19.23 in <sup>2</sup>   | C) 33.93 in <sup>2</sup>                             | D) 20.36 in <sup>2</sup>         |

10. Find the surface area of this cone. Include the surface area of the base of the cone.



| 11. A 710 mL bottle of A) 12 fluid ounces | Pepsi is equivalent to<br>B) 16 fluid ounces | C) 20 fluid ounces | D) 24 fluid ounces |
|---|--|--------------------|--------------------|
| 12. How many liters are                   | in 8 cups?                                   |                    |                    |
| A) 1 L                                    | B) 1.5 L                                     | C) 2 L             | D) 4 L             |

| 13. Mr. Hallihan fills a 8<br>container to complet   | 0 L aquarium with a gallon jug t<br>ely fill the aquarium? | from the States. How many time | es will he have to fill up the |  |  |
|--|--|--------------------------------|--------------------------------|--|--|
| A) 17 times  | B) 18 times  | C) 21 times                    | D) 22 times                    |  |  |
| 14. A cube has a volume $(A)$ 22.5 m <sup>3</sup>  | of 110 cubic feet. What is its vo                          | plume in cubic meters?         | $D) 21 m^{3}$                  |  |  |
| A) 33.5 m <sup>3</sup>   | <b>B</b> ) 10.2 m <sup>3</sup>                             | $C) 4.1 \text{ m}^3$           | D) 3.1 m <sup>3</sup>          |  |  |
| <ul><li>15. Which of the followi</li><li>A) 5 US quarts</li></ul>  | ng has the largest volume?<br>B) 1 British gallon          | C) 17 cups                     | D) 4.5 L                       |  |  |
| Open Response (33 Marks)<br>Show ALL your work in the space provided. Put a box around your final solution and be sure to include units. |  |                                |                                |  |  |
| 1. Make the following un   | it conversions   |                                | [16]                           |  |  |
| a) 8 mi =  | feet   | b) $1250 \text{ in}^2 =$       | $\mathrm{ft}^2$                |  |  |
|  |  |                                |                                |  |  |
| c) 54 $m^3 =$  | vd <sup>3</sup>  | d) 7500 ft =                   | km                             |  |  |
|  | ) *  |                                |                                |  |  |
| e) 16 fl. oz. =  | cups   | f) 10 US gallons =             | US pints                       |  |  |
| ·  | <b>.</b>   |                                |                                |  |  |
|  |  |                                |                                |  |  |
| g) 60 cm <sup>3</sup> =  | _ tbsp   | h) 70 L =                      | Brit gal                       |  |  |
|  |  |                                |                                |  |  |

2. A can of diced tomatoes holds 5 fl oz. Your spaghetti sauce recipe calls for 400 mL of diced tomatoes. **How many cans of tomatoes will you need to buy?** 

[2]

3. Janna is painting the living room in her house. The room measures 16 feet long by 12 feet wide by 10 feet high. She will only paint the walls and ceiling - not the floor. What is the total area Janna will paint? [2]

- 4. a) Calculate the amount of baseboard that will be needed to finish the room below.
  - b) If you can buy baseboard only in 10 foot lengths, how much will it cost if baseboard costs \$2.15/foot? [2]



- 5. The gas tank of Mr. Hallihan's Nissan van can hold 70 litres of gas.
- a) He is travelling in Portland, Maine, and needs to fill up his tank. The cost of gas is \$3.50/gallon. How much will it cost him to fill up, assuming the tank is completely empty?
- b) If Mr. Hallihan drove the same van in England, where gas costs \$5.95/gallon, how much would it cost him to fill up the tank, assuming the tank is completely empty? [2]
- 6. The inside and bottom of an aboveground circular pool need lining. The pool is 6 ft deep with a diameter of 20 ft.
  - a) How much lining is needed to cover the inside of the pool? You can only buy lining in full square feet. [3]



b) Lining costs  $2.25/\text{ft}^2$ . What will it cost to line the pool?

[1]

[2]

[3]