**DA Homework A**

**Dimensional Analysis Review**

**Comparing Units:** *Circle the larger unit in each pair of units.*

1. milliliter or kiloliter

2. decimeter or megameter

3. picogram or decigram

4. centimeter or millimeter

5. nanogram or kilogram

6. microliter or milliliter

**English and Metric Conversions:** *Use dimensional analysis to convert each of the following. Show all work, units, and round answer correctly. Write your final answer on the blank provided.*

7. 16 cm = \_\_\_6.3 in\_\_\_\_ in

|  |  |  |
| --- | --- | --- |
| 16 cm | 1 in | 6.299 in |
|  | 2.54 cm |  |

8. 5.6 g = \_\_\_0.20\_\_\_ oz

|  |  |  |
| --- | --- | --- |
| 5.6 g | 1 oz | 0.19753 oz |
|  | 28.53 g |  |

9. 450 lb = \_\_2.0x105\_\_\_ g

|  |  |  |
| --- | --- | --- |
| 450 lb | 453.59 g | 204115.5 g |
|  | 1 lb |  |

10. 40 m = \_\_\_100\_\_ ft

|  |  |  |
| --- | --- | --- |
| 40 m | 3.281 ft | 131.24 ft |
|  | 1 m |  |

11. 4 gal = \_\_20\_\_ L

|  |  |  |
| --- | --- | --- |
| 4 gal | 1 L | 15.15 L |
|  | 0.264 gal |  |

12. The distance between Happyville and Giggleland is 60 miles. How far is this in kilometers?

|  |  |  |
| --- | --- | --- |
| 60 mi | 1.609 km | 96.54 🡪 100 km |
|  | 1 mi |  |

13. 1 yard is equal to 3 feet. How many feet are in a football field (100 yards)?

|  |  |  |
| --- | --- | --- |
| 100 yd | 3 ft | 300 ft |
|  | 1 yd |  |

**Metric Conversions:** *Use dimensional analysis to convert each of the following. Show all work, units, and round answer correctly. Write your final answer on the blank provided.*

14. 8700 mL = \_\_8.7\_\_\_\_ L

|  |  |  |
| --- | --- | --- |
| 8700 mL | 1 L | 8.7 L |
|  | 1000 mL |  |

15. 25 mg = \_\_0.025\_\_\_\_ g

|  |  |  |
| --- | --- | --- |
| 25 mg | 1 g | 0.025 g |
|  | 1000 mg |  |

16. 250 mL = \_\_0.25\_\_\_\_ L

|  |  |  |
| --- | --- | --- |
| 250 mL | 1 L | 0.25 L |
|  | 1000 mL |  |

17. How many decimeters are in 560 meters?

|  |  |  |
| --- | --- | --- |
| 560 m | 10 dm | 5600 dm |
|  | 1 m |  |

18. 3.68 kg = \_\_3680\_\_\_\_\_ g

|  |  |  |
| --- | --- | --- |
| 3.68 kg | 1 g | 3680 g |
|  | 0.001 kg |  |

19. 568 cm = \_\_\_\_5.68\_\_\_ m

|  |  |  |
| --- | --- | --- |
| 568 cm | 1 m | 5.68 m |
|  | 100 cm |  |

20. You spend 242 minutes in chemistry class each week. How many minutes will you spend in chemistry at the end of the school year (36 weeks)?

|  |  |  |
| --- | --- | --- |
| 242 min | 36 week | 8712 🡪 8710 min/yr |
| 1 week | 1 year |  |