NURSING SKILLS LABORATORY

DOSAGE CALCULATIONS:
ADDITIONAL PRACTICE QUESTIONS

METRIC CONVERSIONS

The metric units that are most commonly used when calculating medication dosages are:

- For weight: kilogram, gram, milligram, microgram
- For volume: litre, milliliter, cubic centimeter

(Note: millilitres (mL) and cubic centimeter (cc) are used interchangeably. Therefore 1 mL = 1 cc.)

To change kilograms (kg) to grams (g):
- Multiply the number of kilograms by 1000
- Move the decimal three places to the right

1. $1 \text{ kg} = \underline{\phantom{000}} \text{ g}$
2. $0.9 \text{ kg} = \underline{\phantom{000}} \text{ g}$
3. $0.25 \text{ kg} = \underline{\phantom{000}} \text{ g}$
4. $0.03 \text{ kg} = \underline{\phantom{000}} \text{ g}$
5. $3.5 \text{ kg} = \underline{\phantom{000}} \text{ g}$

To change grams (g) to kilograms (kg):
- Divide the number of grams by 1000
- Move the decimal three places to the left

6. $1400 \text{ g} = \underline{\phantom{000}} \text{ kg}$
7. $200 \text{ g} = \underline{\phantom{000}} \text{ kg}$
8. $60 \text{ g} = \underline{\phantom{000}} \text{ kg}$
9. $750 \text{ g} = \underline{\phantom{000}} \text{ kg}$
10. $3720 \text{ g} = \underline{\phantom{000}} \text{ kg}$
To change grams (g) to milligrams (mg):
- **Multiply** the number of grams by **1000**
  or
- **Move** the decimal **three** places to the **right**

11. 1 g = __________ mg
12. 1.4 g = __________ mg
13. 0.375 g = __________ mg
14. 0.09 g = __________ mg
15. 0.6 g = __________ mg

To change milligrams (mg) to grams (g):
- **Divide** the number of milligrams by **1000**
  or
- **Move** the decimal **three** places to the **left**

16. 1000 mg = __________ g
17. 475 mg = __________ g
18. 50 mg = __________ g
19. 150 mg = __________ g
20. 5500 mg = __________ g
To change litres (L) to millilitres (mL):
  • **Multiply** the number of litres by **1000**
  or
  • **Move** the decimal **three** places to the **right**

21. 1 L = __________ mL (or cc)
22. 5 L = __________ mL (or cc)
23. 0.75 L = __________ mL (or cc)
24. 0.2 L = __________ mL (or cc)
25. 0.095 L = __________ mL (or cc)

To change millilitres (mL) to litres (L):
  • **Divide** the number of millilitres (mL) by **1000**
  or
  • **Move** the decimal **three** places to the **left**

26. 1000 mL = __________ L
27. 250 mL = __________ L
28. 15 mL = __________ L
29. 965 cc = __________ L
30. 2500 cc = __________ L
<table>
<thead>
<tr>
<th>Metric Unit</th>
<th>Conversion</th>
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<th>Conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 g</td>
<td>1 kg</td>
<td>1.4 kg</td>
<td></td>
</tr>
<tr>
<td>900 g</td>
<td>0.9 kg</td>
<td>0.2 kg</td>
<td></td>
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<tr>
<td>250 g</td>
<td>0.25 kg</td>
<td>0.06 kg (for the test, round off to 0.1 kg)</td>
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<tr>
<td>30 g</td>
<td>0.03 kg</td>
<td>0.75 kg (for the test, round off to 0.8 kg)</td>
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<tr>
<td>3500 g</td>
<td>3.5 kg</td>
<td>3.72 kg (for the test, round off to 3.7 kg)</td>
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<tr>
<td>1000 mg</td>
<td>1 g</td>
<td>16. 1 g</td>
<td></td>
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<tr>
<td>1400 mg</td>
<td>1.4 g</td>
<td>17. 0.475 g</td>
<td>(this would convert to 475mg so don’t round off)</td>
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<tr>
<td>375 mg</td>
<td>0.375 g</td>
<td>18. 0.05 g</td>
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<tr>
<td>90 mg</td>
<td>0.09 g</td>
<td>19. 0.15 g</td>
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<tr>
<td>600 mg</td>
<td>0.6 g</td>
<td>20. 5.5 g</td>
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<td>1000 mL</td>
<td>1 L</td>
<td>21. 1000 mL</td>
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<td>5000 mL</td>
<td>5 L</td>
<td>22. 5000 mL</td>
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<tr>
<td>750 mL</td>
<td>0.75 L</td>
<td>23. 750 mL</td>
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<tr>
<td>200 mL</td>
<td>0.2 L</td>
<td>24. 200 mL</td>
<td>(this would convert to 15mL so don’t round off)</td>
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<tr>
<td>95 mL</td>
<td>0.095 L</td>
<td>25. 95 mL</td>
<td>(this would convert to 965mL so don’t round off)</td>
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<td></td>
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<td>26. 1 L</td>
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<td></td>
<td></td>
<td>27. 0.25 L</td>
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<td>28. 0.015 L</td>
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<td>29. 0.965 L</td>
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<td>30. 2.5 L</td>
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