# Learning Enhancement Team – Mathematics & Statistics

Pharmaceutical Calculations 1 - Solutions

## Conversions

1. Convert the following into the given unit
2. 7250 mg
3. 44.4 mcg
4. 93.4 l
5. 65 mcg
6. 234 mcg
7. 0.25 kg

## Recipes

1. You have the following formula to create 250 ml of something medical sounding:

Ingredient A: 25 g

Ingredient B: 125 g

Ingredient C: 10 ml

Water to 250 ml

Ingredient A:

Ingredient B:

Ingredient C:

Water to 750 ml

1. 2 l = 2000 ml

Ingredient A: 200 g

Ingredient B: 1000 g

Ingredient C: 80 ml

Water to 2 l

Ingredient A: 5 g

Ingredient B: 25 g

Ingredient C: 2 ml

Water to 50 ml

## Concentrations

1. 20 mg : 1 ml

200 mg : 10 ml

**1000 mg** : 50 ml

5 mg : 1 ml

5000 mg : 1000 ml

**5 g** : 1 l

1. 40 g : 100 g

400 g : 1000 g

**400 g** : 1 kg

1. 2 mg : 1 ml

2000 mcg : 1 ml

200 mcg : 0.1 ml

800 mcg : **0.4 ml**

1. 20 g : 100 ml

20000 mg : 100 ml

200 mg : 1 ml

400 mg : 2 ml

50 mg : 0.25 ml

450 mg : **2.25 ml**

1. 8 g : 100 ml

8000 mg : 100 ml

800 mg : 10 ml

400 mg : 5 ml

**1200 mg** : 15 ml

1. 10% w/v means 10 g / 100 ml

10 g : 100 ml

20 g : 200 ml

5 g : 50 ml

**25 g** : 250 ml

1. 5 g : 100 ml

5000 mg : 100 ml

500 mg : 10 ml

**250 mg** : 5 ml

1. 15 % v/v means 15 ml / 100 ml

15 ml : 100 ml

1.5 ml : 10 ml

**6 ml** : 40 ml

6 ml active means 40 – 6 = **34 ml** non-active

1. 0.2 g : 100 ml

2000 mg : 100 ml

20 mg : **1 ml**



2 g : 100 ml

2000 mg : 100 ml

2 mg : **0.1 ml**



5 g : 100 ml

5000 mg : 100 ml

1000 mg : 20 ml

10 mg : 0.2 ml

40 mg : **0.8 ml**



5 mcg : 1 ml

25 mcg : **5 ml**



1 g : 100 ml

6 g : **600 ml**



2 g : 100 ml

2000 mg : 100 ml

200 mg : 10 ml

10 mg : 0.5 ml

210 mg : **10.5 ml**