

## TASK A

Convert the following measurements into milligrams

- |                                    |                                      |                                   |
|------------------------------------|--------------------------------------|-----------------------------------|
| 1) $1\text{g} = 1,000\text{mg}$    | 2) $0.25\text{g} = 250\text{mg}$     | 3) $50\text{mcg} = 0.05\text{mg}$ |
| 4) $0.001\text{g} = 1\text{mg}$    | 5) $3\text{mcg} = 0.003\text{mg}$    | 6) $18\text{g} = 18,000\text{mg}$ |
| 7) $750\text{mcg} = 0.75\text{mg}$ | 8) $2\text{kg} = 2,000,000\text{mg}$ |                                   |

## TASK B

Calculate how many tablets the patient should be given in each scenario

	DOSE TO BE GIVEN	TABLET STOCK STRENGTH	NUMBER OF TABLETS NEEDED
1)	4,000mg	4g	$4,000\text{mg} \div (4 \times 1,000\text{mg}) = 4,000\text{mg} \div 4,000\text{mg} = 1 \text{ tablet}$
2)	200mcg	0.1mg	$200\text{mcg} \div (0.1 \times 1,000\text{mcg}) = 200\text{mcg} \div 100\text{mcg} = 2 \text{ tablets}$
3)	0.2g	50mg	$(0.2 \times 1,000\text{mg}) \div 50\text{mg} = 200\text{mg} \div 50\text{mg} = 4 \text{ tablets}$
4)	75mcg	0.025mg	$75\text{mcg} \div (0.025 \times 1,000\text{mcg}) = 75\text{mcg} \div 25\text{mcg} = 3 \text{ tablets}$
5)	0.01g	5mg	$(0.01 \times 1,000\text{mg}) \div 5\text{mg} = 10\text{mg} \div 5\text{mg} = 2 \text{ tablets}$
6)	4,500mg	1.5g	$4,500\text{mg} \div (1.5 \times 1,000\text{mg}) = 4,500\text{mg} \div 1,500\text{mg} = 3 \text{ tablets}$

## TASK C

For each scenario, calculate the volume of solution that the patient needs to be given in millilitres.

	DOSE TO BE GIVEN	SOLUTION STRENGTH	SOLUTION VOLUME	VOLUME OF SOLUTION THE PATIENT NEEDS
1)	100mg	50mg	1ml	$(100\text{mg} \div 50\text{mg}) \times 1\text{ml} = 2 \times 1\text{ml} = 2\text{ml}$
2)	300mg	0.2g	6ml	$0.2\text{g} = 200\text{mg}$ $(300\text{mg} \div 200\text{mg}) \times 6\text{ml} = 1.5 \times 6\text{ml} = 9\text{ml}$
3)	1,000mg	1.25g	10ml	$1.25\text{g} = 1,250\text{mg}$ $(1,000\text{mg} \div 1,250\text{mg}) \times 10\text{ml} = 0.8 \times 10\text{ml} = 8\text{ml}$
4)	4g	160mg	3ml	$4\text{g} = 4,000\text{mg}$ $(4,000\text{mg} \div 160\text{mg}) \times 3\text{ml} = 25 \times 3\text{ml} = 75\text{ml}$
5)	750mcg	0.5mg	6ml	$0.5\text{mg} = 500\text{mcg}$ $(750\text{mcg} \div 500\text{mcg}) \times 6\text{ml} = 1.5 \times 6\text{ml} = 9\text{ml}$
6)	150g	1,000mg	2ml	$150\text{g} = 150,000\text{mg}$ $(150,000\text{mg} \div 1,000\text{mg}) \times 2\text{ml} = 150 \times 2\text{ml} = 300\text{ml}$