

Scientific Methods

# Dimensional Analysis Practice

1. How many **dollars** are worth as much as 30 **dimes**?

$$? \text{ dollars} = 30 \text{ dimes} \times \left( \frac{2 \text{ quarters}}{5 \text{ dimes}} \right) \times \left( \frac{1 \text{ dollar}}{4 \text{ quarters}} \right) = \boxed{3 \text{ dollars}}$$

2. How many **dimes** are worth as much as 70 **pennies**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

3. How many **pennies** are worth as much as 8 **dimes**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

4. How many **dollars** are worth as much as 200 **pennies**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

5. How many **jacks** are worth as much as 60 **washes**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

6. How many **lincs** are worth as much as 2 **franks**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

7. How many **grants** are worth as much as 400 **washes**?

$$? \text{ _____} = \text{_____} \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) \times \left( \frac{\text{_____}}{\text{_____}} \right) = \boxed{\text{_____}}$$

Conversion Factors	
1 nickel	= 5 pennies
1 dime	= 2 nickels
2 quarters	= 5 dimes
1 dollar	= 4 quarters
1 wash	= 1 dollar
1 linc	= 5 washes
1 ham	= 2 lincs
1 jack	= 2 hams
2 grants	= 5 jacks
1 frank	= 2 grants

Use a separate sheet of paper to do the following problems, but do them all exactly the same way as the previous ones...

8. How many **grants** are worth as much as 3 **hams**?
9. How many **quarters** are worth as much as 7 **lincs**?
10. How many **nickels** are worth as much as 4 **hams**?
11. How many **franks** are worth as much as 160 **lincs**?
12. How many **pennies** are worth as much as 9 **franks**?