

Numeracy Skills

LET Mathematics & Statistics

1 General Arithmetic

1. Calculate: $4 - 9$
2. Calculate: $-6 + (-5)$
3. Calculate: $-3 - (-7)$
4. Calculate: -8×-4
5. Calculate: $45 \div -9$
6. Calculate: $-5 + 8 - 12$
7. Calculate: $10 - (-5) + (-20)$
8. Calculate: $7 + 6 \times 3$
9. Calculate: $50 - 5^2$
10. Calculate: $(12 - 5) \times 4$
11. Calculate: $24 \div 4 \times 2$
12. Calculate: $20 - 15 + 5$
13. Calculate: $3 + 4 \times (10 - 7)$
14. Calculate: $40 - 10 \times 2 + 15 \div 3$
15. Calculate: $-5 + 3 \times (4 - 9)$

2 Fractions

1. Simplify the fraction $\frac{8}{12}$.
2. Simplify the fraction $\frac{15}{25}$.

- 3.** Simplify the fraction $\frac{18}{24}$.
- 4.** Simplify the fraction $\frac{24}{36}$.
- 5.** Simplify the fraction $\frac{42}{56}$.
- 6.** Calculate: $\frac{2}{9} + \frac{5}{9}$
- 7.** Calculate: $\frac{3}{4} - \frac{1}{8}$
- 8.** Calculate: $\frac{1}{3} + \frac{2}{5}$
- 9.** Calculate: $\frac{7}{8} - \frac{1}{6}$
- 10.** Calculate: $\frac{1}{2} + \frac{1}{4} + \frac{1}{8}$
- 11.** Calculate: $\frac{3}{7} \times \frac{2}{5}$
- 12.** Calculate: $\frac{3}{4} \times \frac{2}{3}$
- 13.** Calculate: $5 \times \frac{3}{4}$
- 14.** Calculate: $\frac{4}{9} \times \frac{3}{8}$
- 15.** Calculate: $\frac{1}{2} \times \frac{2}{3} \times \frac{3}{5}$
- 16.** Calculate: $\frac{2}{3} \div \frac{1}{5}$
- 17.** Calculate: $\frac{3}{7} \div \frac{2}{3}$
- 18.** Calculate: $4 \div \frac{1}{3}$
- 19.** Calculate: $\frac{5}{8} \div 2$
- 20.** Calculate: $\frac{4}{5} \div \frac{8}{15}$
- 21.** Convert $2\frac{1}{4}$ to an improper fraction and multiply by $\frac{2}{3}$.
- 22.** Calculate: $(\frac{2}{5})^2$
- 23.** Calculate: $\frac{1}{2} + \frac{1}{3} \times \frac{1}{2}$
- 24.** Calculate: $(\frac{1}{2} + \frac{1}{4}) \div \frac{3}{8}$

25. Calculate: $1\frac{1}{2} \div 2\frac{1}{4}$

3 Percentages

- 1.** Convert $\frac{4}{5}$ to a percentage.
- 2.** Convert $\frac{5}{8}$ to a percentage.
- 3.** Convert $\frac{13}{20}$ to a percentage.
- 4.** Convert $\frac{7}{40}$ to a percentage.
- 5.** Convert $\frac{19}{25}$ to a percentage.
- 6.** Calculate 15% of 60.
- 7.** Calculate 45% of 240.
- 8.** Calculate 6% of 350.
- 9.** Calculate 12.5% of 80.
- 10.** Calculate 95% of 200.
- 11.** Calculate the percentage increase from 40 to 46.
- 12.** Calculate the percentage decrease from 80 to 60.
- 13.** Calculate the percentage increase from 25 to 75.
- 14.** A price falls from 200 to 190. What is the percentage decrease?
- 15.** A population grows from 1,500 to 1,800. What is the percentage growth?
- 16.** Increase 250 by 12%.
- 17.** Decrease 400 by 15%.
- 18.** Increase 45 by 4%.
- 19.** Decrease 120 by 2.5%.
- 20.** A salary of 24,000 is increased by 3.5%. What is the new salary?

- 21.** A number is increased by 10% and the result is 55. Calculate the original number.
- 22.** After a decrease of 20%, a price is 64. Calculate the original price.
- 23.** An item is sold for 230 which includes a 15% profit. What was the cost price?
- 24.** Water volume decreases by 5% to 190 litres. What was the original volume?
- 25.** After a massive 150% increase, a value is 500. What was the original value?

4 Standard Form

- 1.** Write 3×10^2 as an ordinary number.
- 2.** Write 5.2×10^3 as an ordinary number.
- 3.** Write 1.45×10^4 as an ordinary number.
- 4.** Write 6×10^5 as an ordinary number.
- 5.** Write 9.02×10^4 as an ordinary number.
- 6.** Write 4000 in Standard Form.
- 7.** Write 250 in Standard Form.
- 8.** Write 8,000,000 in Standard Form.
- 9.** Write 52,100 in Standard Form.
- 10.** Write 19,500,000 in Standard Form.
- 11.** Write 5×10^{-1} as an ordinary number.
- 12.** Write 2×10^{-3} as an ordinary number.
- 13.** Write 4.5×10^{-2} as an ordinary number.
- 14.** Write 1.23×10^{-4} as an ordinary number.
- 15.** Write 9.9×10^{-3} as an ordinary number.
- 16.** Write 0.006 in Standard Form.

17. Write 0.04 in Standard Form.
18. Write 0.000052 in Standard Form.
19. Write 0.00105 in Standard Form.
20. Write 0.0000009 in Standard Form.

5 Numeracy Problems

1. A coffee shop generates £4,500 in revenue this month. The cost of coffee beans, milk, and rent totals £3,250. Calculate the profit.
2. A startup spends £12,000 on development but only makes £4,500 in sales. What is their profit?
3. A laptop costs £800 excluding VAT. VAT is charged at 20%. Calculate the total price including VAT.
4. A supplier offers a 15% trade discount on an order of £2,000. What is the discounted price?
5. A service bill is £144, which includes VAT at 20%. Calculate the cost *before* VAT was added.
6. **Inventory Valuation:** Calculate the total cost for each item line, and then the Grand Total.

Item	Quantity	Unit Cost (£)	Total Cost (£)
Hard Drives	10	45.50	
Monitors	5	120.00	
Keyboards	20	15.25	
GRAND TOTAL			

7. A tech company is valued at £45,000,000. Write this in Standard Form.
8. The GDP of a country is £2.8 Trillion (£2,800,000,000,000). Write this in Standard Form.
9. A budget deficit is listed as 1.2×10^5 . Write this as an ordinary number.

10. Supplier Selection: You need to buy 50 office chairs. Supplier A charges £40 per chair. Supplier B charges £50 per chair but offers a 25% discount on the total order. What is the **difference in total price** between the two suppliers?

11. Reconciling a Bank Statement: Fill in the missing values.

Date	Description	Money In	Money Out	Balance
01 Jan	Opening Balance	—	—	£1,200
05 Jan	Office Rent		500	
10 Jan	Client Payment			£1,500
15 Jan	Staff Wages			£900
20 Jan	Utility Bill		150	

12. Break-Even Analysis: A bakery has fixed monthly costs of £2,000. They sell cakes for £5.00 each. It costs them £1.00 in ingredients to make each cake. How many cakes must they sell to cover their costs?

13. Commission: A salesperson earns a basic salary of £1,500 per month. They also earn 10% commission on any sales **above** £10,000. In March, they made £18,000 in sales. Calculate their total pay for the month.

14. Importing: A UK business buys a machine from the USA for \$6,000 (USD). The exchange rate is £1 = \$1.25. The shipping company charges a flat fee of £200. What is the total cost in Pounds Sterling (£)?

15. Net Pay: An employee's gross monthly pay is £3,000. Income Tax is calculated as 20% of their earnings **after** a tax-free allowance of £1,000 is deducted. Calculate their Net Pay.