

# MULTIPLICATIVE THINKING – SET 6

**A** Knows all times tables up to 10

$$8 \times 7 = 56$$

$$9 \times 3 = 27$$

$$5 \times 4 = 20$$

**B** Know some division facts.

$$12 \div 2 = 6$$

$$30 \div 5 = 6$$

$$27 \div 3 = 9$$

$$80 \div 10 = 8$$

$$16 \div 4 = 4$$

**C** Solves simple fractions using division knowledge

$$\frac{1}{2} \text{ of } 24 = 24 \div 2 = 12$$

$$\frac{1}{5} \text{ of } 40 = 40 \div 5 = 8$$

$$\frac{1}{3} \text{ of } 18 = 18 \div 3 = 6$$

$$\frac{1}{4} \text{ of } 28 = 28 \div 4 = 7$$

**D** Half and Double

$$14 \times 4 =$$

$$18 \times 5 =$$

$$18 \times 5 =$$

$$7 \times 8 = 56$$

$$9 \times 10 = 90$$

$$9 \times 10 = 90$$

**E** Place Value Partitioning

$$6 \times 17 =$$

Multiply the tens  $6 \times 10 = 60$

Multiply the ones  $6 \times 7 = 42$

Add together  $6 \times (10 + 7) = (60 + 42)$

$$6 \times 17 = 102$$

**D** Rounding and Compensation

$$95 \times 7 =$$

Round  $100 \times 7 = 700$

Compensate  $-(5 \times 7) = 35$

Find difference  $700 - 35 = 665$

$$95 \times 7 = 665$$

**f** Using known multiplication facts to solve unknown problems

$$8 \times ? = 112$$

Multiply the 10s  $8 \times 10 = 80$

Find the difference  $112 - 80 = 32$

Work out the missing fact  $8 \times 4 = 32$

Add together  $8 \times (10 + 4) = 112$

$$8 \times 14 = 112$$

$$114 \div 6 =$$

Inverse Equation  $6 \times ? = 114$

Multiply the 10s  $6 \times 10 = 60$

Find the difference  $114 - 60 = 54$

Work out the missing fact  $6 \times 9 = 54$

Add together  $6 \times 19 = 114$

$$114 \div 6 = 19$$

**g** Finding a fraction of a number where the numerator is not one

**Find  $\frac{3}{4}$  of 84**

Divide by denominator  $84 \times \frac{1}{4} = 84 \div 4$

Split number and divide  $80 \div 4 = 20$

$$4 \div 4 = 1$$

Add together  $20 + 1 = 21$

Multiply by the numerator  $21 \times 3 = 63$

$$\frac{3}{4} \text{ of } 84 = 63$$

**$111 \times \frac{2}{3} = ?$**

Divide by denominator  $111 \times \frac{1}{3} = 111 \div 3$

Split number and divide  $90 \div 3 = 30$

$$21 \div 3 = 7$$

Add together  $30 + 7 = 37$

Multiply by the numerator  $37 \times 2 = 74$

$$111 \times \frac{2}{3} = 74$$