TARGET To use knowledge of the order of operations.

Combining mathematical operations could lead to confusion unless there are clear rules about the order in which they are done.

Example $5 + 3 \times 2$

This could be $5 + 3 \times 2 = 8 \times 2 = 16$ or $5 + 3 \times 2 = 5 + 6 = 11$

For this reason mathematical operations must be done in this order.

1. Deal with brackets
2. Divide and multiply
3. Add and subtract

Examples

$18 + 4 \times (7 + 5)$
$18 + 4 \times 12$
$18 + 48$
66

$(10 + 6) \div 2 + 3$
$16 \div 2 + 3$
$8 + 3$
11

A

Work out. Show your working.
Remember: ÷/× before +/−

1. $3 + 2 \times 4$
2. $9 - 6 \div 3$
3. $4 \times 8 - 6$
4. $20 + 12 \div 4$
5. $15 - 3 \times 2$
6. $24 \div 4 + 2$
7. $60 - 20 \div 5$
8. $12 \times 3 + 7$
9. $97 - 8 \times 9 + 11$
10. $30 \div 6 + 4 \times 5$
11. $4 + 16 \div 2 + 15$
12. $10 \times 2 + 4 \times 3$
13. $120 - 40 \div 8 - 50$
14. $8 + 2 \times 6 - 13$
15. $100 \div 10 - 5 \div 5$
16. $15 - 3 \times 4 - 3$

B

Work out. Show your working.
Remember: Brackets first.

1. $(55 - 4) \times (5 + 5)$
2. $55 - 4 \times 5 + 5$
3. $(20 + 12) \div 4 - 1$
4. $20 + 12 \div 4 - 1$
5. $6 \times (6 - 2) + 9$
6. $6 \times 6 - (2 + 9)$
7. $(24 + 48) \div 8 + 4$
8. $24 + 48 \div (8 + 4)$
9. $42 - (6 + 9) \div 3$
10. $(16 - 8) \times (10 - 6)$
11. $10 + 20 + 30 \times 40$
12. $45 \div (9 - 6) - 6$
13. $(54 - 18) \div (4 + 5)$
14. $16 + 4 \times (3 + 8)$
15. $200 - (5 + 7) \times 7$
16. $(100 - 28) \div (18 - 2)$

C

Work out. Show your working.

1. $(2 + 7) \times 4 - 10 \div 2$
2. $12 \div 2 + (4 - 2) \times 6$
3. $(40 - 10) \div 5 + 1 \times 12$
4. $16 \times 2 - (8 \times 8) \div 4$
5. $6 \times (3 + 5) - 18 \div 3$
6. $(25 + 75) \div 5 - 4 \times 5$
7. $72 \div (12 - 3) + 6 \times 7$
8. $(10 - 7) \times 9 + 12 \div 2$

Copy and complete by putting in any missing brackets.

9. $10 \times 2 + 6 = 80$
10. $16 - 10 \div 2 = 3$
11. $11 - 5 \times 7 + 2 = 54$
12. $9 + 6 \div 3 - 1 = 12$
13. $20 + 25 - 10 \div 5 = 23$
14. $17 - 2 \times 6 + 4 = 150$
15. $60 \div 4 + 8 - 3 = 2$
16. $9 + 15 - 9 \times 3 = 27$