Name: .....

Sheet 17 F Order of operations

When a calculation has a mixture of signs, we always do any × and ÷ parts *before* going from left to right.

(a) $40 \div 5 \times 2$
$= 8 \times 2$
$= 16$

(b) $9 + 8 - 7$
$= 17 - 7$
$= 10$

(c) $5 + 2 \times 3$
$= 5 + 6$
$= 11$

× before +

(d) $10 - 8 \div 2$
$= 10 - 4$
$= 6$

÷ before −

Part A

Work out the following.

1. $5 + 3 \times 2$ **2.** $4 - 1 \times 3$ **3.** $27 - 4 \times 3$

4. $2 + 2 \times 5$ **5.** $9 + 2 \times 6$ **6.** $13 - 11 \times 1$

7. $7 \times 2 + 3$ **8.** $9 \times 4 - 12$ **9.** $2 \times 8 - 7$

10. $4 \times 7 + 2$ **11.** $13 \times 2 + 4$ **12.** $8 \times 5 - 15$

13. $6 + 10 \div 5$ **14.** $7 - 16 \div 8$ **15.** $8 - 14 \div 7$

16. $21 \div 3 + 5 \times 4$ **17.** $10 \div 2 + 1 \times 3$ **18.** $15 \div 5 + 18 \div 6$

19. $5 \times 5 - 6 \times 4$ **20.** $2 \times 12 - 4 \div 2$

Using brackets

If a calculation contains brackets, the contents of these must be worked out first *before* going from left to right.

Part B

In Questions **1** to **20** remember to work out the brackets first.

1. $3 + (6 \times 8)$ **2.** $(3 \times 8) + 6$ **3.** $(8 \div 4) + 9$

4. $3 \times (9 \div 3)$ **5.** $(5 \times 9) - 15$ **6.** $10 + (10 \times 8)$

7. $(16 - 7) \times 6$ **8.** $48 \div (14 - 2)$ **9.** $160 \div (4 \times 4)$

10. $8 + (9 \times 8)$ **11.** $67 - (24 \div 3)$ **12.** $(11 \times 8) + 9$

13. $(6 \times 6) + (7 \times 7)$ **14.** $(12 \div 3) \times (18 \div 6)$ **15.** $(5 \times 12) - (3 \times 9)$

16. $(20 - 12) \times (17 - 9)$ **17.** $100 - (99 \div 3)$ **18.** $1001 + (5 \times 3)$

19. $(3 \times 4 \times 5) - (72 \div 9)$ **20.** $(2 \times 5 \times 3) \div (11 - 5)$