

**Example 10****Self Tutor**Evaluate:  $35 - 10 \div 2 \times 5 + 3$ 

$$\begin{aligned}
 & 35 - 10 \div 2 \times 5 + 3 \\
 = & 35 - 5 \times 5 + 3 && \{\text{division and multiplication working from left}\} \\
 = & 35 - 25 + 3 \\
 = & 10 + 3 && \{\text{subtraction and addition working from left}\} \\
 = & 13
 \end{aligned}$$

**Example 11****Self Tutor**Evaluate:  $2 \times (3 \times 6 - 4) + 7$ 

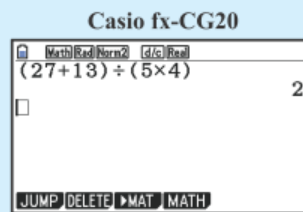
$$\begin{aligned}
 & 2 \times (3 \times 6 - 4) + 7 \\
 = & 2 \times (18 - 4) + 7 && \{\text{inside brackets, multiply}\} \\
 = & 2 \times 14 + 7 && \{\text{evaluate expression in brackets}\} \\
 = & 28 + 7 && \{\text{multiplication next}\} \\
 = & 35 && \{\text{addition last}\}
 \end{aligned}$$

If you do not follow the order rules, you are likely to get the wrong answer.

**Example 13****Self Tutor**Evaluate:  $\frac{16 - (4 - 2)}{14 \div (3 + 4)}$ 

$$\begin{aligned}
 & \frac{16 - (4 - 2)}{14 \div (3 + 4)} \\
 = & \frac{16 - 2}{14 \div 7} && \{\text{brackets first}\} \\
 = & \frac{14}{2} && \{\text{evaluate numerator, denominator}\} \\
 = & 7 && \{\text{do the division}\}
 \end{aligned}$$

For a fraction we evaluate the numerator and denominator separately, then perform the division.

**Example 14****Self Tutor**Use your calculator to simplify  $\frac{27 + 13}{5 \times 4}$ .We first write the fraction as  $\frac{(27 + 13)}{(5 \times 4)}$ .So,  $\frac{27 + 13}{5 \times 4} = 2$ .

Notice the use of brackets.

