

## Following Orders or PEMDAS



In a mathematical expression like  $16 + 5 \cdot 35$ , it may not be clear if we should add the 16 and 5 first, then multiply by the 35, or multiply the 5 and 35 first, then add the 16. One way gives the answer of 191 and the other is 735.

$$\begin{array}{r} 16 + 5 \cdot 35 \\ 21 \cdot 35 \\ 735 \end{array}$$

$$\begin{array}{r} 16 + 5 \cdot 35 \\ 16 + 175 \\ 191 \end{array}$$

Which is correct? To avoid confusion, an official **order of operations** has been established.

### Order of Operations

#### PEMDAS:

P -

E -

MD -

AS -

So, what is the correct answer to  $16 + 5 \cdot 35$ ? Find the work at the top of the page that follows the correct order of operations, and circle that answer.

Here is another example:  $8[36 - 3(2 + 5)] \div 8 + 3 = 8[36 - 3(7)] \div 8 + 3$

$$\begin{aligned} &= 8[36 - 21] \div 8 + 3 \\ &= 8[15] \div 8 + 3 \\ &= 120 \div 8 + 3 \\ &= 15 + 3 \\ &= 18 \end{aligned}$$

Now you try a few:

1.  $25 \div 5 + 4 \cdot 10 =$

2.  $9 \cdot 2 - 12 \div 6 =$

3.  $24 - 18 \div 3 \div (6 - 4) =$

4.  $27 \div (6 - 3) \div 2 =$

5.  $5 \cdot 20 - 2 \cdot 40 + 27 \div 3 - 6 \div 2 =$

6.  $4 - (9 - 5) + 20 \cdot (4 - 2) \cdot 6 =$

Scrambled answers:  $\frac{9}{2}$ , 16, 21, 26, 45, 240