



## A Multiplicative String



Have a go at doing this sum in your head

$$3 \times 7 \times 2 \times 4 \times 5$$

Did you multiply from left to right?



# A Multiplicative String



This is my suggestion...

$$3 \times 7 \times 2 \times 4 \times 5$$

$$(2 \times 5) \times ((3 \times 7) \times 4)$$

$$(10) \times ((21) \times 4)$$

$$(10) \times (84)$$

$$840$$

- Why have I done it like this?
- What do the brackets represent?

As you can see the order of multiplication doesn't matter but changing the order can make the calculation easier !



In each of the four sets of expressions one is not the same as the rest can you find it?

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li><math>(3x + 4y) + 2(x + 2y)</math></li><li><math>4(2x + 5y) - 3(x + 4y)</math></li><li><math>3(2x + 3y) - (x - y)</math></li><li><math>3(x + 3y) + (2x - y)</math></li></ul> | <ul style="list-style-type: none"><li>• <math>(x + 3)(x + 7)</math></li><li>• <math>x(x + 3) + 7(x + 3)</math></li><li>• <math>x(x + 2) + 7(x + 2) + x + 7</math></li><li>• <math>x(x + 4) + 6(x + 3)</math></li></ul>           |
| <ul style="list-style-type: none"><li><math>x(x + 3) + 3(x + 5)</math></li><li><math>2(x + 4) + x(x + 4)</math></li><li><math>(x + 3)^2 + 6</math></li><li><math>x(x + 3) + 4(x + 3) + (x + 3)</math></li></ul>    | <ul style="list-style-type: none"><li>• <math>x(x - 6) - (-2x) - 2(x - 6)</math></li><li>• <math>x(x - 6) + 2(x - 6)</math></li><li>• <math>x(x - 2) - 2(x - 2) - 2(x - 4)</math></li><li>• <math>(x - 3)^2 + 3</math></li></ul> |



In each of the four sets of expressions one is not the same as the rest can you find it?

- |                            |                                 |
|----------------------------|---------------------------------|
| • $(3x + 4y) + 2(x + 2y)$  | • $(x + 3)(x + 7)$              |
| • $4(2x + 5y) - 3(x + 4y)$ | • $x(x + 3) + 7(x + 3)$         |
| • $3(2x + 3y) - (x - y)$   | • $x(x + 2) + 7(x + 2) + x + 7$ |
| • $3(x + 3y) + (2x - y)$   | • $x(x + 4) + 6(x + 3)$         |
- 
- |                                   |                                    |
|-----------------------------------|------------------------------------|
| • $x(x + 3) + 3(x + 5)$           | • $x(x - 6) - (-2x) - 2(x - 6)$    |
| • $2(x + 4) + x(x + 4)$           | • $x(x - 6) + 2(x - 6)$            |
| • $(x + 3)^2 + 6$                 | • $x(x - 2) - 2(x - 2) - 2(x - 4)$ |
| • $x(x + 3) + 4(x + 3) + (x + 3)$ | • $(x - 3)^2 + 3$                  |