Year 4 – multiply three numbers using commutativity

Learning Reminders

Commutative property: like addition, multiplication can get to the same answer even with the numbers in a different order. E.g. 3 + 5 + 7 =15

We can also change it so that it is easier to add, for e.g. 7 + 3 =10 + 5 = 15

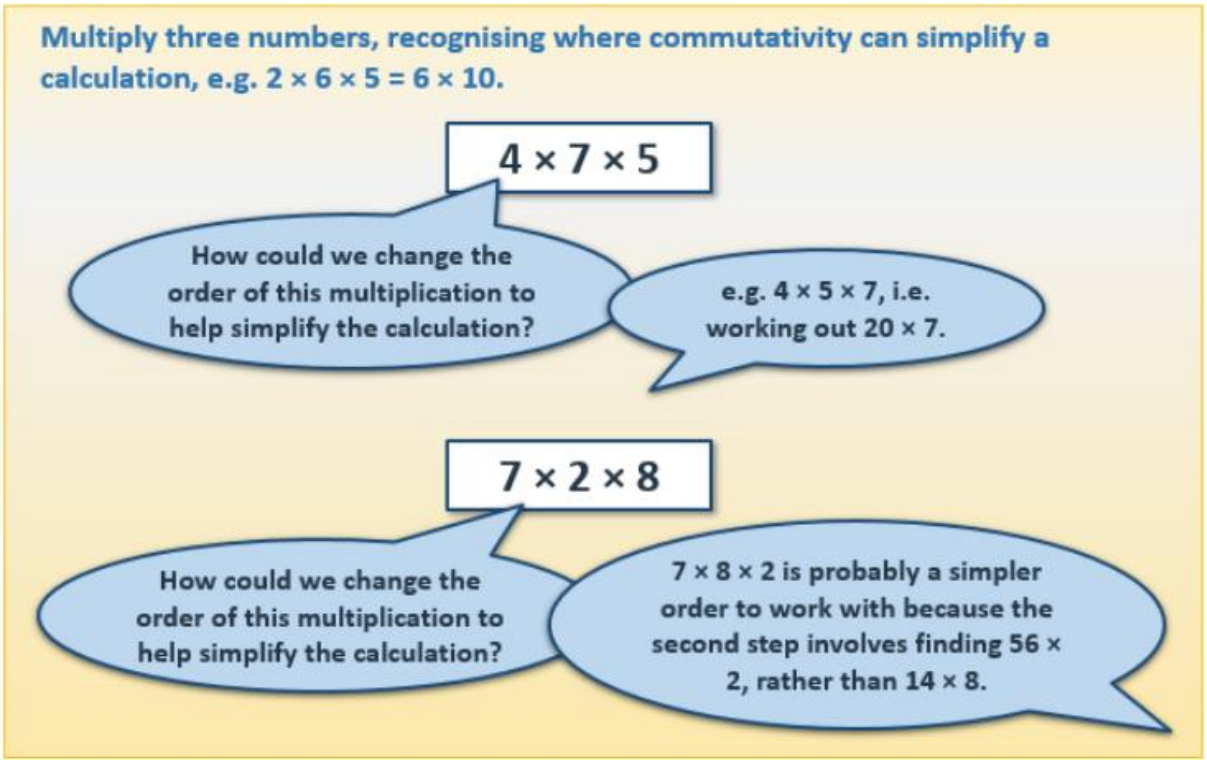
Look at this multiplication example:

2 x 9 x 5 = 90.

We would normally do 2 x 9 = 18 and then multiply it by 5. (18 x 5 might be difficult to do especially mentally).

But we can change the numbers around to our advantage, look at this:

9 x 5 = 45 and then 45 x 2 = 90. Wasn't that much easier?



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Practice Sheet Mild

Multiplying three numbers together

- Choose three numbers.
- Decide what order would be most efficient to multiply them together. Write them in that order and find the product.
- Repeat for at least seven more trios of numbers.

Challenge

- Can you find a trio with a product of 60?
- Can you find a trio with a product of 270?

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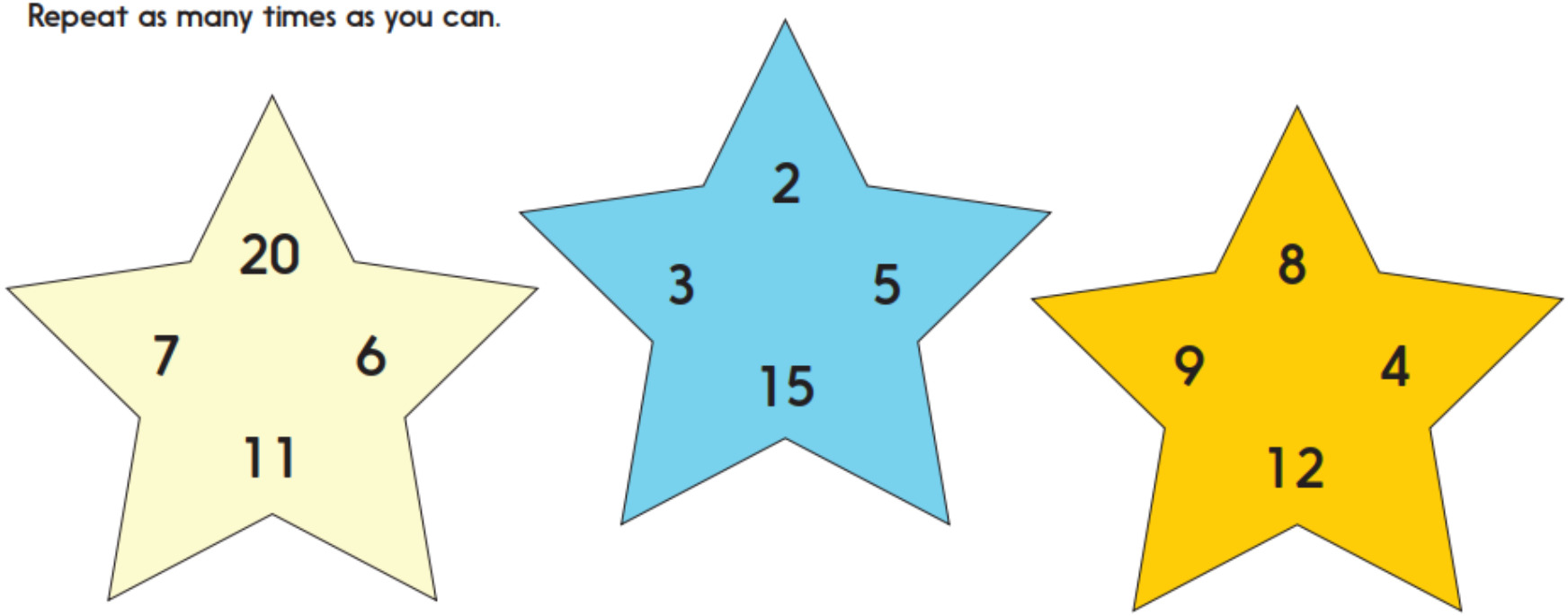
Practice Sheet Hot

Multiplying three numbers together

Choose one number from each of the 3 stars.
Decide the easiest order to multiply them together.
Repeat as many times as you can.



Challenge

Find the missing numbers:

☐ x 7 x 6 = 420 8 x 11 x ☐ = 440 3 x ☐ x 5 = 135