Lesson 1: Scaling Re-cap

We know about place value but let's have a little reminder:

0.4 x 0.7 = 0.28 0.7 x 0.4 = 0.28	0.4 x 7 = 2.8 4 x 0.7 = 2.8	4 x 7 = 28 7 x 4 = 28	40 x 7 = 280 70 x 4 = 280	400 x 7 = 2800 700 x 4 = 2800

Now it's your turn:

Spicy

0.6 x 0.3 =

70 x 4 =

0.8 x 3 =

900 x 6 =

0.7 x 0.9 =

60 x 6 =

400 x 8 =

0.5 x 7 =

Hot

7 x ☐ = 420

☐ x 0.9 = 0.63

☐ x 900 = 5400

12 x ☐ = 840

☐ x 6 = 2.4

8 x ☐ = 6400

90 x ☐ = 540

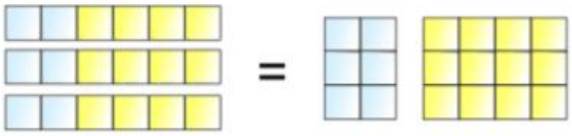
☐ x 0.8 = 0.56

Lesson 2: Investigate the Distributive Law

The Distributive Law says that **multiplying a number by a group of numbers added together** is the same as doing each multiplication separately.

Example: $3 \times (2 + 4) = 3 \times 2 + 3 \times 4$

So the "3" can be "distributed" across the "2+4" into 3 times 2 and 3 times 4.



3 x (2+4) 3x2 + 3x4

Have a try at these. Remember that you choose the level you start with. After a few questions, if it's too tricky, go back a level. If it's too easy, move onto the next one.

Mild

1. **18** × 4 = □ × 4 + □ × 4 = □ + □ = □
2. **23** × 5 = □ × 5 + □ × 5 = □ + □ = □
3. **24** × 6 = □ × 6 + □ × 6 = □ + □ = □
4. **25** × 8 = □ × 8 + □ × 8 = □ + □ = □

Spicy

1. **38** × 5 = □ × 5 + □ × 5 = □ + □ = □
2. **53** × 6 = □ × 6 + □ × 6 = □ + □ = □
3. **64** × 8 = □ × 8 + □ × 8 = □ + □ = □
4. **45** × 9 = □ × 9 + □ × 9 = □ + □ = □

Hot

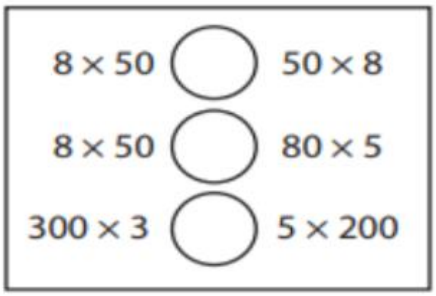
1. **58** × 5 = □ × 5 + □ × 5 = □ + □ = □
2. **73** × 6 = □ × 6 + □ × 6 = □ + □ = □
3. **84** × 8 = □ × 8 + □ × 8 = □ + □ = □
4. **95** × 9 = □ × 9 + □ × 9 = □ + □ = □

Challenge:

Remember to explain your reasoning!

Place one of these symbols in the circle to make the number sentence correct:
>, < or =.

Explain your reasoning.



Now apply your knowledge of the distributive law to answer these questions:

6. Miss Green buys 7 boxes of pencils for her class. There are 84 pencils in a box. How many pencils did she buy in total?

7. Apples cost 92p. Eve buys 6 apples. How much does she need to pay?

8. Anya buys 9 tubes of sweets. There are 87 sweets in each tube. How many sweets does she have?

Lesson 3: Re-cap Compact Method

628 x 5

628
x 5
40
100
3000
3140

Remember:

In the compact method, we multiply each digit by 5. So, it's

8 x 5 = 40

20 x 5 = 100

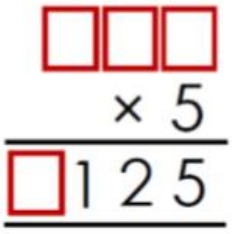
600 x 5 = 3000

Then we add those numbers together to get our final answer.

Mild	Spicy	Hot
345 x 3	567 x 6	781 x 7
482 x 4	579 x 8	823 x 8
389 x 5	624 x 4	829 x 7
467 x 3	678 x 6	735 x 9
498 x 4	592 x 8	924 x 7
396 x 5	673 x 4	835 x 8
452 x 4	652 x 6	942 x 7
487 x 3	694 x 6	896 x 8

Challenge:

How many ways?



Fill in the missing digits.

Level 1: I can find a way

Level 2: I can find different ways

Level 3: I know how many ways there are

A train ticket from Bristol to London costs £206.

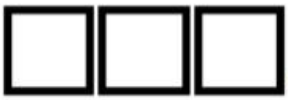
How much would it cost 6 adults to travel from Bristol to London?

Children travel for half the full price cost. 2 children are travelling with the 6 adults.

What is the total cost?

Use these three digits to make a three digit number

Calculate the answer when multiplied by 7. Try to get as close to 4500 as you can.



When you multiply an even 3 digit number by a single digit even number, the product is even.

Always true? Sometimes true?

Never true? How do you know?