

Maths Lesson

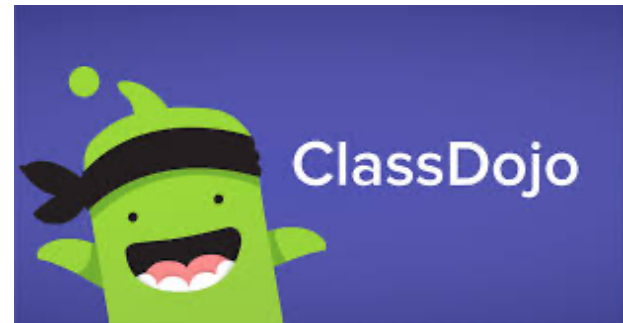
Year 3

Write your date and title in your exercise book.

22.2.21

Can I use my \times tables to work out related facts?

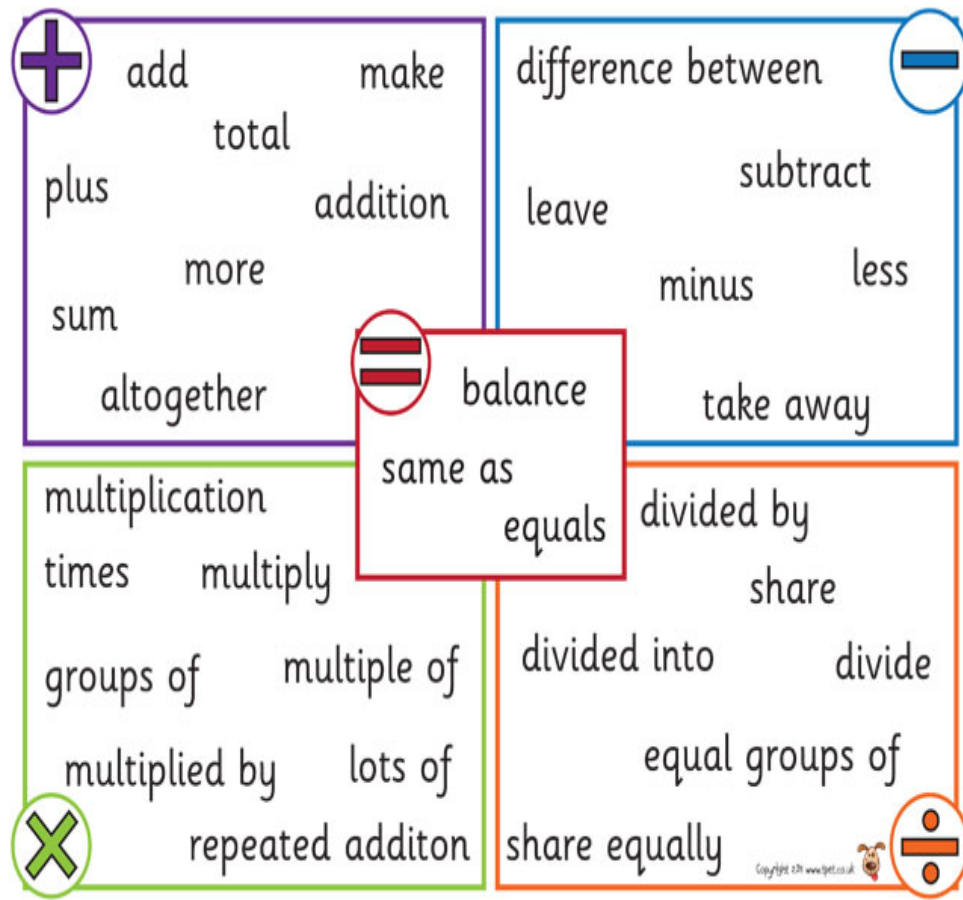
Don't forget to post a photo of your work on class dojo!



Warm Up Work

Problem Solving Questions




1. Increase 30 by 15
2. What is 15 less than 30?
3. What is the sum of 30 and 12?
4. Multiply 12 by 2
5. What is 3 lots of 11?
6. Share 22 between 2
7. What is 6 more than 25?
8. There were 20 cakes shared between 4 friends. How many each?
9. Write your own question like these ones.



Main Lesson: Our focus today is to use the 4 times tables to solve related questions.

X by 4

Using the 4 x tables

- $3 \times 4 = 12$  • $4 \times 3 = 12$
- $3 \times 40 = 120$  • $4 \times 30 = 120$
- $3 \times 400 = 1200$  • $4 \times 300 = 1200$

What do you notice?

When you know your 4 times tables, you can use them to work out related calculations.

X by 4

Using the 4 x tables

- $3 \times 4 = 12$ \longrightarrow • $4 \times 3 = 12$
- $3 \times 40 = 120$ \longrightarrow • $4 \times 30 = 120$
- $3 \times 400 = 1200$ \longrightarrow • $4 \times 300 = 1200$

Possible Answers:

With multiplication, you can swap the first two numbers around and still get the same answer.

You can use either the x4 or x3 tables to work out the above calculations.
Each answer is ten times bigger than the last one.

Top Tip

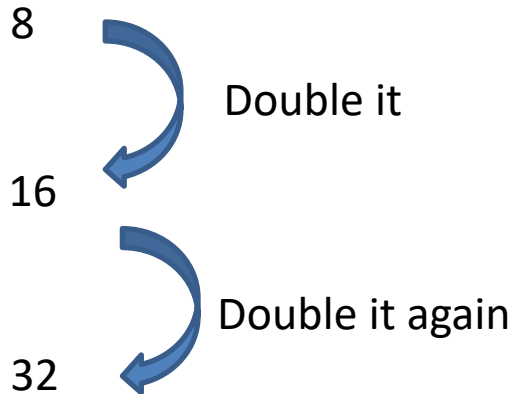
An easy way to work out x by 4 questions.

X by 4

X by 4 by doubling and doubling again.

Calculation:
4 x 8

Working out:



Answer:
32

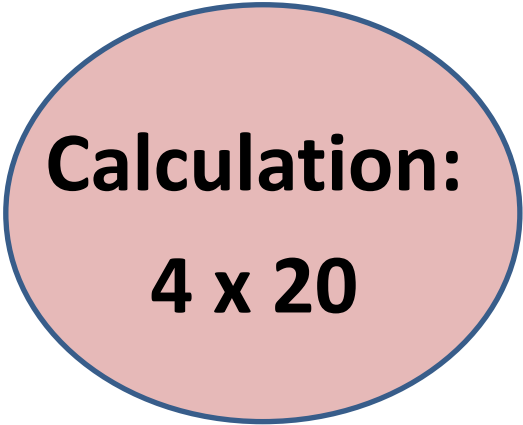
To solve a x by 4 question - you can double the number and then double it again to find the answer.

You can do this with small and large numbers.

Another example:

X by 4


X by 4 by doubling and doubling again.




Calculation:
4 x 20

Working out:

20



40



80

Double it

Double it again

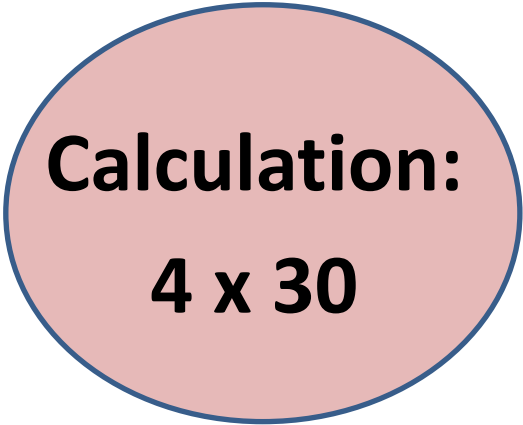
Answer:
80

When you x by 4, you can double the number and then double it again.
You can do this with small and large numbers.

Another example:

X by 4


X by 4 by doubling and doubling again.




Calculation:
4 x 30

Working out:

30



60



120

Double it

Double it again

Answer:
120

When you x by 4, you can double the number and then double it again.
You can do this with small and large numbers.

Top Tip

To work out 'Fill the Gap' questions:

X by 4

Using the inverse calculation to solve questions with gaps

The inverse of x by 4 is \div by 4

$$\boxed{} \times 4 = 24$$

To work out what this number is, do the inverse calculation:

$$24 \div 4 = \boxed{}$$

TARGET To recall and use \times/\div facts for 4.

A

Work out

- 1 3×4
- 2 6×4
- 3 1×4
- 4 8×4
- 5 10×4
- 6 4×4
- 7 11×4
- 8 2×4
- 9 9×4
- 10 12×4
- 11 5×4
- 12 7×4
- 13 $40 \div 4$
- 14 $16 \div 4$
- 15 $24 \div 4$
- 16 $4 \div 4$
- 17 $32 \div 4$
- 18 $12 \div 4$
- 19 $48 \div 4$
- 20 $28 \div 4$
- 21 $8 \div 4$
- 22 $44 \div 4$
- 23 $20 \div 4$
- 24 $36 \div 4$

B

Copy and complete.

- 1 $\square \times 4 = 20$
- 2 $\square \times 4 = 32$
- 3 $\square \div 4 = 6$
- 4 $\square \div 4 = 12$
- 5 $\square \times 4 = 12$
- 6 $\square \times 4 = 40$
- 7 $\square \div 4 = 4$
- 8 $\square \div 4 = 8$
- 9 $\square \times 4 = 44$
- 10 $\square \times 4 = 24$
- 11 $\square \div 4 = 1$
- 12 $\square \div 4 = 9$
- 13 $\square \times 4 = 16$
- 14 $\square \times 4 = 28$
- 15 $\square \div 4 = 5$
- 16 $\square \div 4 = 10$
- 17 $\square \times 4 = 48$
- 18 $\square \times 4 = 36$
- 19 $\square \div 4 = 11$
- 20 $\square \div 4 = 7$
- 21 There are four walls in each room. How many walls are there in:
 - a) 8 rooms
 - b) 15 rooms
 - c) 21 rooms?

C

Work out

- 1 40×4
- 2 90×4
- 3 30×4
- 4 60×4
- 5 50×4
- 6 70×4
- 7 20×4
- 8 80×4
- 9 $120 \div 4$
- 10 $240 \div 4$
- 11 $200 \div 4$
- 12 $280 \div 4$
- 13 $400 \div 4$
- 14 $320 \div 4$
- 15 $160 \div 4$
- 16 $360 \div 4$

Work out by multiplying by 4 and doubling.

- 17 5×8
- 18 7×8
- 19 3×8
- 20 6×8
- 21 12×8
- 22 9×8
- 23 4×8
- 24 8×8

Work out by halving and dividing by 4.

- 25 $24 \div 8$
- 26 $48 \div 8$
- 27 $16 \div 8$
- 28 $72 \div 8$
- 29 $40 \div 8$
- 30 $64 \div 8$
- 31 $88 \div 8$
- 32 $56 \div 8$

- 33 There are eight fish in each packet. How many packets can be made from:
 - a) 32 fish
 - b) 400 fish
 - c) 104 fish?

Now have
a go at
these

A = Easiest
B = Medium
C = Hardest

If you have time...

Try a multiplication and division **game**.

Click on the link.



<https://www.topmarks.co.uk/maths-games/7-11-years/multiplication-and-division>

How Did You Do?

Now take a photo of your work and post it on class dojo.

