

Lesson 21 **NUMBER****Multiplication facts: the 3, 6, 9 and 7, 8 tables**

CURRICULUM ALIGNMENT

NUM.OPS.3

understand and apply flexibly the four operations; and the relationships between operations.

ALG.PRR.3a

identify rules that describe the structure of a pattern and use these rules to make predictions.

INTERACTIVES

Hundred Square · display, explore

Fact Race · explore

Maths Bingo · challenge

WHAT THIS LESSON TEACHES

Every answer in the 6 times table is exactly double the matching answer in the 3 times table, because 6 is 3 doubled. So if you know a 3 fact, double it to get the 6 fact.

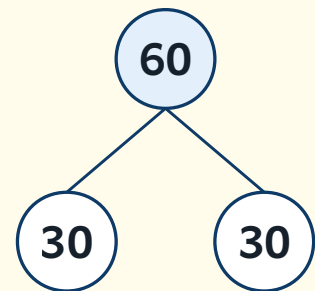
→ $3 \times 4 = 12$, so $6 \times 4 = 24$ (double 12).

→ If you forget 6×7 , do $3 \times 7 = 21$ and double it to get 42.

MODEL THIS ON THE BOARD

6 × 10 BY DOUBLING A 3 FACT

- ① Start with the matching 3 fact: $3 \times 10 = 30$.
- ② Double that answer, because 6 is 3 doubled: $30 + 30 = 60$.
- ③ So $6 \times 10 = 60$.



DISCUSSION STARTER

REFLECT

Which times-table pattern sticks in your mind best, and how does it help you?

ANSWER KEY

a) 3, 6, 9, 12, 15, 18, 21, 24

b) 6, 12, 18, 24

c) $9=9$, $18:1+8=9$, $27:2+7=9$, $36:3+6=9$, $45:4+5=9$

Q1: 48

a) Always : Because 6 is 3 doubled, every 6 answer is twice the matching 3 answer.

b) Always : For $9 \times 5 = 45$, $4 + 5 = 9$, and this works for every 9 fact up to 9×10 .

c) Sometimes : $3 \times 4 = 12$ is even but $3 \times 5 = 15$ is odd, so it happens only sometimes.

d) Never : $7 \times 8 = 56$ while $8 \times 8 = 64$, so they are never equal for the same multiplier.

EXTENSION SHEET · STRETCH ANSWERS

S1: €70

S2: 24

S3: 30

S4: 56

S5: 45

Investigation: Hunt the table patterns — open-ended; scan pupils' working for valid solution paths rather than a single answer.