GO MATHS

Student Journal

Sample Unit

Authors
Brian Tickle BA
James Burnett M Ed
Calvin Irons Ph D

Contributing Author
Allan Turton B Ed

Series Consultants
Jan Glazier MA
Bruce Llewellyn B Sc

ORIGO EDUCATION

Investigating Numerical Patterns

OUTCOME NS 2.3

1	2	3	4	5	6	7	8	9
2	4	6	8	10	12	14	16	18
3	6	9	12	15	18	21	24	27
4	8	12	16	20	24	28	32	36
5	10	15	20	25	30	35	40	45
6								
7								
8								
9								

1. Look at the numbers in the first five rows. Write about two patterns you see.

2. Use patterns you see to help you complete the chart.

3. Colour the last row and column red. What do you notice?

4. Colour the diagonal that begins at the top left. What do you notice?

5. Colour the diagonal that begins at the top right. What do you notice?

6. Choose a number from the top row. Add it to the number directly below. Where is the answer?

SAMPLE

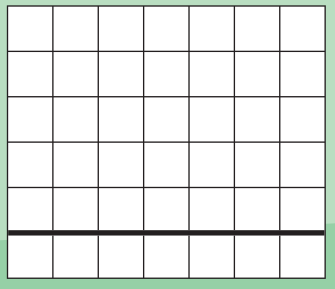
FF **Write about another addition pattern you can find like that in Question 6.**

Revising the Use-a-Known-Fact Strategy

OUTCOME NS 2.3

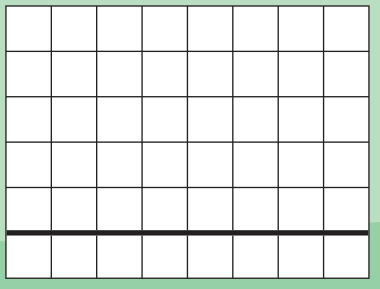
1. Colour the grid to match the first fact. Then write the answers.

a.



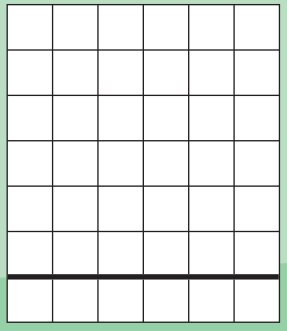
5 × 7 = _____ **so** 6 × 7 = _____

b.



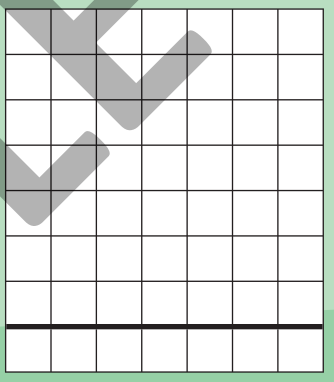
5 × 8 = _____ **so** 6 × 8 = _____

c.



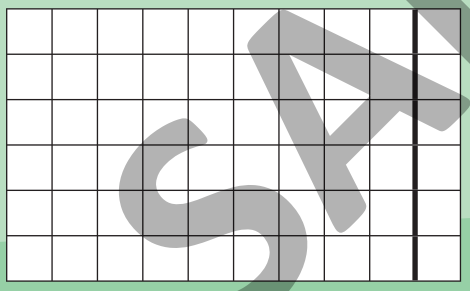
6 × 6 = _____ **so** 7 × 6 = _____

d.



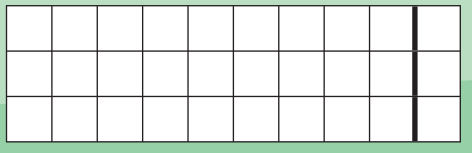
7 × 7 = _____ **so** 8 × 7 = _____

e.



6 × 10 = _____ **so** 6 × 9 = _____

f.



3 × 10 = _____ **so** 3 × 9 = _____

2. Write the answer to the first fact to help you answer the second fact.

a. 5 × 4 = _____

so 6 × 4 = _____

b. 10 × 7 = _____

so 9 × 7 = _____

c. 10 × 4 = _____

so 9 × 4 = _____

SAMPLE

FF **Write some different ways you could work out 5 × 9.**

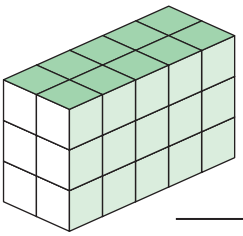
Multiplying with Three Factors

OUTCOME NS 2.3

Follow these steps to calculate how many cubes are in each box shape.

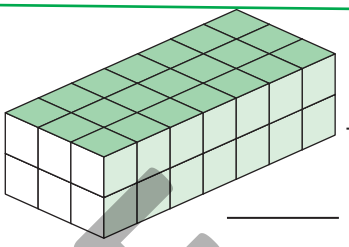
- Write the dimensions of the box shape.
- Write the dimensions in the order that you would multiply.
- Write the total.

a.



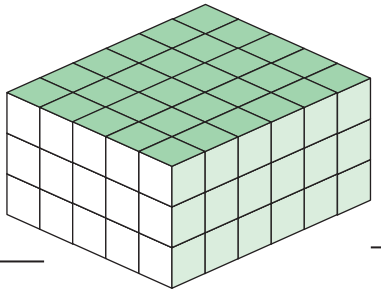
_____ × _____ × _____ = _____

b.



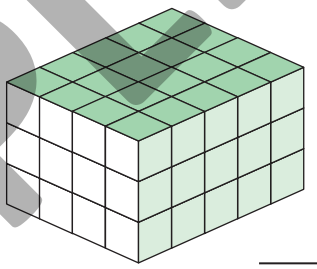
_____ × _____ × _____ = _____

c.



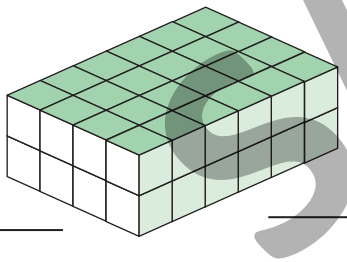
_____ × _____ × _____ = _____

d.



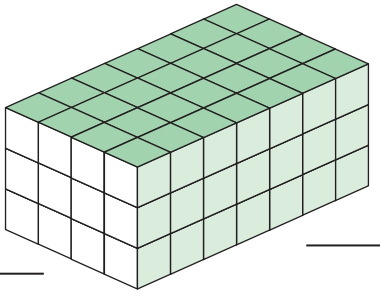
_____ × _____ × _____ = _____

e.



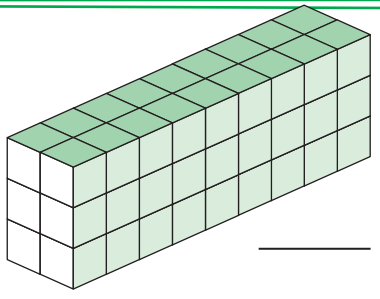
_____ × _____ × _____ = _____

f.



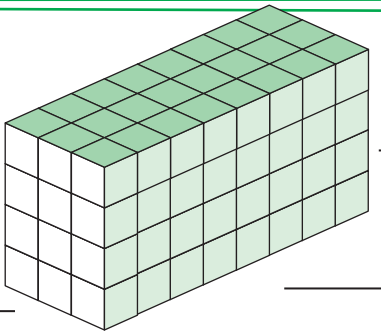
_____ × _____ × _____ = _____

g.



_____ × _____ × _____ = _____

h.



_____ × _____ × _____ = _____

SAMPLE

Write some possible dimensions of a box shape that has a total of 72 cubes.

Finding Factors

OUTCOME NS 2.3

Write all the factors of each number.

a. 15 is the same as ___ × ___ × ___ × ___

b. 25 is the same as ___ × ___ × ___ × ___

c. 14 is the same as ___ × ___ × ___ × ___

d. 16 is the same as ___ × ___ × ___ × ___ × ___ × ___

e. 28 is the same as ___ × ___ × ___ × ___ × ___ × ___

f. 18 is the same as ___ × ___ × ___ × ___ × ___ × ___

g. 24 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

h. 64 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

i. 30 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

j. 36 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

k. 80 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

l. 100 is the same as ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___ × ___

SAMPLE

FF Write another pair of factors for 80 and 100.

Exploring Multiples

OUTCOME NS 2.3

1. **a.** Write the multiples of 10 up to 100 that you say when you start at 3 and count in threes.

_____

b. Loop the numbers you say when you start at 3 and count in threes. Use the numbers above to help you.

27 37 42 49 54 62 78 81 88 95

2. **a.** Write the multiples of 10 up to 100 that you say when you start at 4 and count in fours.

_____

b. Use the numbers you wrote to help you loop the numbers you would say when you start at 4 and count in fours.

34 36 47 52 60 69 76 85 88 96

3. **a.** Write the multiples of 10 between 100 and 200 that you say when you count in threes and fours.

_____ Count in threes

_____ Count in fours

b. Loop the numbers you say when you count in threes.

117 124 135 144 154 162 177 189 193

c. Loop the numbers you say when you count in fours.

118 128 136 147 152 164 172 188 194

SAMPLE

FF **Write some numbers up to 200 that are multiples of both 3 and 4.**