## Beat the Clock

Score: $\qquad$
Time: $\qquad$

| $\times$ | 3 | 4 | 8 | 5 | 10 |
| :---: | :--- | :--- | :--- | :--- | :--- |
| 4 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 12 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 7 |  |  |  |  |  |
| 1 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 11 |  |  |  |  |  |
| 10 |  |  |  |  |  |
| 9 |  |  |  |  |  |
| 8 |  |  |  |  |  |

My target for next time is: $\qquad$
Beat the Clock

Score:
Time: $\qquad$

| $x$ | 3 | 4 | 8 | 5 | 10 |
| :---: | :--- | :--- | :--- | :--- | :--- |
| 4 |  |  |  |  |  |
| 2 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 12 |  |  |  |  |  |
| 3 |  |  |  |  |  |
| 7 |  |  |  |  |  |
| 1 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 11 |  |  |  |  |  |
| 10 |  |  |  |  |  |
| 9 |  |  |  |  |  |
| 8 |  |  |  |  |  |

My target for next time is: $\qquad$

| 73 | 2 | $3^{3}$ | $\mathrm{L}_{3}{ }^{3}$ | 8 | 43 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 23 | 200 | 89 | $7^{2}$ | 3 | 9 93.45 |
| 929 | 7 | 49 | $2^{3}$ | 3 | 900 |
| 90 | 2 | $2^{2}$ | $2^{3}$ | 9 93.3 | 8 |
| 73 | 43 | 7 | 20 | 36 | 96 |
| ขอ | 49 | 63 | $2^{2}$ | 90 | 229 |
| 96 | 49 | 900 | 4 | $7^{3}$ |  |
| $2^{3}$ | 43 | 90 | จ0 | 96 | $8^{2}$ |


| (2) | 7 | $22^{3}$ | 36 | 9 $\square_{3} \sqrt{3}$ | $2^{3}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $7^{3}$ | 49 | 2 | 72 | $9^{3}$ | 36 |
| 229 | 200 | $2^{3}$ | $3^{3}$ | 7 | 35 |
| 3 | $9^{3}$ | 22 | $2^{3}$ | 39 | 80 |
| 3 | 36 | 4 | 22 | $7^{3}$ | 80 |
| 229 | 900 | $7^{2}$ | 49 | $3^{3}$ | 8 |
| 499 | 90 | 900 | Q00 | 4 | Q |
| 43 | $2^{3}$ | 96 | 3 | $7^{3}$ | 63 |


| 23 | 82 | 9 | 64 | 4 | 23 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 96 | 92 | $2^{3}$ | 8 | 43 | 39 |


| 5 | 929 | 900 | $7^{2}$ | 63 | 96 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 92 | $2^{3}$ | 20 | 43 | 39 | 900 |

## Bingo Instructions

Each child needs a bingo card. It doesn't matter if more than one child has the same card: it will just mean more winners!

Read out the questions below. If the children have the answer on their card, they can cross it off. Once they have crossed off all six of their numbers, they shout 'bingo' and have won!

| 1. | What is $4^{2}$ ? |
| :---: | :---: |
| 2. | Calculate seven lots of 3. |
| 3. | What is the product of 9 and 8? |
| 4. | 49 is the answer to a square number calculation. What was the question? |
| 5. | 100 is which number squared? |
| 6. | 36 is the answer to a square number calculation. What was the question? |
| 7. | What is $12^{2}$ ? |
| 8. | How many 8s are there in 64? |
| 9. | $10^{2}$ |
| 10. | What is the product of 4 and 1 ? |
| 11. | What is $1^{2}$ ? |
| 12. | How many 5s are there in 60? |
| 13. | 121 is the square of which number? |
| 14. | $8^{2}$ |
| 15 | $7^{2}$ |


(2) REGENT STUDIES


Cis Recent



## Fantastic Fractions! Answers

| Question | Answer |  |  |
| :---: | :---: | :---: | :---: |
| $t$ | Find the fractions of these numbers: |  |  |
|  | Find $\frac{2}{8}$ of $64=16$ | Find $\frac{6}{7}$ of $70=60$ | Find $\frac{3}{6}$ of $36=18$ |
|  | Find $\frac{2}{3}$ of $90=60$ | Find $\frac{4}{10}$ of $200=80$ | Find $\frac{1}{2}$ of $70=35$ |
|  | Find $\frac{3}{4}$ of $60=45$ | Find $\frac{2}{9}$ of $81=18$ |  |
| $t$ | Find the fractions of these numbers: |  |  |
|  | Find $\frac{2}{8}$ of $88=22$ | Find $\frac{6}{7}$ of $91=78$ | Find $\frac{3}{6}$ of $360=180$ |
|  | Find $\frac{2}{3}$ of $42=28$ | Find $\frac{4}{10}$ of $1000=400$ | Find $\frac{1}{12}$ of $168=14$ |
|  | Find $\frac{3}{4}$ of $500=375$ | Find $\frac{2}{9}$ of $126=28$ | Find $\frac{3}{9}$ of $99=33$ |
|  | Find $\frac{2}{6}$ of $90=30$ |  |  |
| $t \rightarrow$ | Find the fractions of these numbers: |  |  |
|  | Find $\frac{2}{8}$ of $888=222$ | Find $\frac{6}{7}$ of $175=150$ | Find $\frac{3}{6}$ of $3600=1800$ |
|  | Find $\frac{2}{3}$ of $195=130$ | Find $\frac{4}{10}$ of $10000=4000$ | Find $\frac{2}{12}$ of $168=28$ |
|  | Find $\frac{3}{4}$ of $104=78$ | Find $\frac{5}{9}$ of $126=70$ | Find $\frac{4}{9}$ of $99=44$ |
|  | Find $\frac{2}{6}$ of $504=168$ |  |  |

1) a) 24
$28,32,36$,
40 , 44, 48
b)

c) $\qquad$ $78,72,66$
2) 


3) a) $3,6,9,12,15,18,21,24,27,30$
b) $6,12,18,24,30$
c) Various answers which may include: All multiples of 6 are also multiples of 3.
The numbers in the 6 times table can also be found in the $\mathbf{3}$ times table.
Every other number in the multiples of $\mathbf{3}$ is a multiple of 6 .
d) Yes

1) a) False. Even multiples of 9 include: 36, 54, 72, 90, 108...
b) True.
$4+6+2=12$
12 is divisible by $\mathbf{3}$ so 462 is a multiple of 3
c) False. 21 is a multiple of $3 ; 35$ is a multiple of $5 ; 70$ is a multiple of 10 ...
2) Set $A .16$ is the odd one out as it is not a multiple of 3.

Set B. 12 is the odd one out as it is not a multiple of 8.
Set C. $\mathbf{3}$ is the odd one out as it is not a multiple of 9.
3) No. Some are multiples of three but some aren't.

567 is. $5+6+7=18 ; 18 \div 3=6$
261 is. $2+6+1=9 ; 9 \div 3=3$
952 isn't. $9+5+2=16 \quad 16$ is not divisible by 3
257 isn't. $2+5+7=14 \quad 14$ is not divisible by 3

1) Two possible answers: 72 and 96
2) 54
3) a) $150,153,156,159,162,165,168,171,174,177,180,183,186,189,192,195,198$
b) $152,156,160,164,168,172,176,180,184,188,192,196,200$
c) $156,168,180,192$
d) The common multiples follow a pattern of adding 12 each time as $3 \times 4=12$.
e) 204 because $192+12=204$
4) Complete the following sequences of multiples:

b)
 21, 28,

c)
 96, $\square$ , 84, $\square$ , 72, 66
5) Match each number to its multiple.

Each number should only be matched once.

3) a) List all of the multiples of 3 up to 30 .
b) List all of the multiples of 6 up to 30 .
c) What do you notice about both of the lists?
d) Will 54 be a multiple of 3 and 6?

1) Are these statements true or false? Explain how you know.
a)

| Statement | True or False? | Explanation |
| :--- | :--- | :--- |
| All multiples of 9 are odd <br> except 18. |  |  |
| 462 is a multiple of 3. |  |  |
| Multiples of 7 are not common <br> multiples in any other times table. |  |  |

2) Circle the odd number out in each set of numbers. Explain your reasoning.

| Set A | Set B | Set C |
| :---: | :---: | :---: |
| 12 | 16 | 36 |
| 42 | 12 | 81 |
| 27 | 48 | 9 |
| 33 | 88 | 3 |
| 16 | 72 | 27 |
| 21 | 32 | 108 |

$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
3) Lucas says that these 3-digit numbers are all multiples of 3 . Do you agree? Prove how you know.
$\qquad$
$\qquad$


1) James is thinking of a number. What could his number be? Is there more than one answer?

2) a) List the multiples of 3 between 150 and 200 .
$\qquad$
b) List the multiples of 4 between 150 and 200.
$\qquad$
c) Identify the common multiples of 3 and 4 between 150 and 200.
$\qquad$
d) What do you notice about these common multiples? Is there a pattern you can identify?
e) What would the next common multiple of 3 and 4 be if you continued this pattern?
3) Complete the following sequences of multiples:
a) 24 ,
 , 32, 36, $\square$ , 44, $\square$ $\geq$
$\bullet$
 ,32, 36, , 44,

b)

$\square$ 21, 28,

c) $\square$ 96, $\square$ , 84, $\square$ ,72, 6
4) Match each number to its multiple.

Each number should only be matched once.

3) a) List all of the multiples of 3 up to 30 .
b) List all of the multiples of 6 up to 30 .
c) What do you notice about both of the lists?
d) Will 54 be a multiple of 3 and 6?

1) Complete the following sequences of multiples:
a)
 32, 36
 , 44,

$\cdots$
b)
 21, 28, $\square$ , $\square, 49$
c) $\square$ 96, $\square$ 84, $\square$ 72, 6
2) Match each number to its multiple.

Each number should only be matched once.

3) a) List all of the multiples of 3 up to 30 .
b) List all of the multiples of 6 up to 30 .
c) What do you notice about both of the lists?
d) Will 54 be a multiple of 3 and 6?

1) Are these statements true or false? Explain how you know.
a)

All multiples of 9 are odd except 18.
b) $\quad 462$ is a multiple of 3 .
c)

Multiples of 7 are not common multiples in any other times table.
2) Can you identify the odd number out in each set of numbers? Explain your reasoning.

| Set A | Set B | Set C |
| :---: | :---: | :---: |
| 12 | 16 | 36 |
| 42 | 12 | 81 |
| 27 | 48 | 9 |
| 33 | 88 | 3 |
| 16 | 72 | 27 |
| 21 | 32 | 108 |



1) Are these statements true or false? Explain how you know.
a)
All multiples of 9 are odd except 18.
b)
462 is a multiple of 3 .
Multiples of 7 are not common multiples in any other times table.
2) Can you identify the odd number out in each set of numbers? Explain your reasoning.

| Set A | Set B | Set C |
| :---: | :---: | :---: |
| 12 | 16 | 36 |
| 42 | 12 | 81 |
| 27 | 48 | 9 |
| 33 | 88 | 3 |
| 16 | 72 | 27 |
| 21 | 32 | 108 |

1) James is thinking of a number. What could his number be? Is there more than one answer?


My number is:

- A multiple of 6 and 8.
- Greater than 50 but less than 100.

2) How many marbles does Eva have in her collection?

## PMMHHUHUHU

- The total is a multiple of 6 and 9.
- She has between 30 and 60 marbles.
- The number of marbles is also a multiple of 3 and 2.
- The second digit of the number of marbles is lower than the first digit.


3) a) List the multiples of 3 between 150 and 200 .
b) List the multiples of 4 between 150 and 200.
c) Identify the common multiples of 3 and 4 between 150 and 200.
d) What do you notice about these common multiples? Is there a pattern you can identify?
e) What would the next common multiple of 3 and 4 be if you continued this pattern?
4) James is thinking of a number. What could his number be? Is there more than one answer?

5) How many marbles does Eva have in her collection?


- The total is a multiple of 6 and 9.
- She has between $\mathbf{3 0}$ and 60 marbles.
- The number of marbles is also a multiple of 3 and 2.
- The second digit of the number of marbles is lower than the first digit.


3) a) List the multiples of 3 between 150 and 200 .
b) List the multiples of 4 between 150 and 200.
c) Identify the common multiples of 3 and 4 between 150 and 200.
d) What do you notice about these common multiples? Is there a pattern you can identify?
e) What would the next common multiple of 3 and 4 be if you continued this pattern?

## Factors Treasure Hunt Cards

## Teacher note:

Print these pages out and stick them up or hide them for the children to find. They record their answers on their Factors Treasure Hunt Sheets.

## Factors Treasure Hunt

I can say whether numbers are prime or composite.

Look at your factors below.
Search for numbers that are multiples of your factor. For example, if your factor is 5 then it matches with 20, 65 and 35 because they are multiples of 5 . In other words, 5 is a factor of those numbers. Write those numbers next to your factor below.
How many can you find?
Happy hunting!

| 2 |  |
| :---: | :--- |
| 5 |  |
| 3 |  |
| 4 |  |
| 10 |  |




## Factors Treasure Hunt

I can say whether numbers are prime or composite.

Look at your factors below.
Search for numbers that are multiples of your factor. For example, if your factor is 5 then it matches with 20, 65 and 35 because they are multiples of 5 . In other words, 5 is a factor of those numbers. Write those numbers next to your factor below.
How many can you find?
Happy hunting!

| 4 |  |
| :--- | :--- |
| 8 |  |
| 7 |  |
| 6 |  |
| 9 |  |
| 12 |  |
| 3 |  |
| 2 |  |



## Factors Treasure Hunt Answers



## Factors Treasure Hunt

I can say whether numbers are prime or composite.

Look at your factors below.
Search for numbers that are multiples of your factor. For example, if your factor is 5 then it matches with 20, 65 and 35 because they are multiples of 5 . In other words, 5 is a factor of those numbers. Write those numbers next to your factor below.
How many can you find?
Happy hunting!

| 4 |  |
| :---: | :--- |
| 8 |  |
| 7 |  |
| 6 |  |
| 25 |  |
| 9 |  |
| 12 |  |
| 16 |  |
| 3 |  |
| 2 |  |



## Factors Treasure Hunt Answers

| Question | Answer |  |
| :--- | :--- | :--- |
|  | Search for numbers that are multiples of your factor. Write those numbers next to your factor below. |  |
|  | 4 | $64,32,12,48,44,56$ |
|  | 8 | $64,32,48,56$ |
|  | 7 | 70,56 |
|  | 6 | 12,48 |
|  | 25 | 25,75 |
|  | 27 |  |
| 12 | 48,12 |  |
|  | 64,48 |  |
|  | $12,48,75,27$ |  |
|  | $64,32,12,70,48,44,56$ |  |

I have...
Who has...?
thirty-five
multiplied by
one thousand

I have...

## 35000

Who has...?
$65000 \div 100$

I have...

## six hundred and fifty

I have...

## 7200

Who has...?
the product of 100 and 72
ten times 35

## 350

## 672000 $\div 1000$

I have...

Who has...?

## 672

I have...

56000

Who has...?
the number a thousand times bigger than 120

I have...

## 120000

Who has...?

a million<br>divided by a thousand

## one thousand $640 \times 10$

I have...
six thousand four hundred

Who has...?
the number ten times bigger than six thousand

I have...

Who has...?

## 60000

I have...

## 45000

Who has...?
two thousand seven hundred and sixty divided by ten

I have...
Who has...?

## 276

I have...

## nine thousand

I have...
five thousand six hundred and ten

Who has...?

## 561000 <br> $\div 100$

Who has...?
the product of ten and seven hundred

I have...
seven
thousand

Who has...?
$1000 \div 100$

I have...
$10 \times 2200$

I have...
Who has...?

## 22000

$840 \div 10$

I have...

## eighty-four

Who has...?
the number one hundred times smaller than 53700

I have...

| 537 | $724 \times 100$ |
| :--- | :--- |

Who has...?

I have...

## 72400

Who has...?

## ten multiplied by 62

I have...
Who has...?

## 620

## $104000 \div 10$

I have...
Who has...?

## 10400

$$
3900 \times 10
$$

I have...

## 39000

Who has...?
eight hundred
shared by ten

I have...

## eighty

Who has...?

## 1000000

divided by ten

I have...

Who has...?
100000
$30 \times 1000$

Who has...?
$46390 \div 10$

I have...

Who has...?
$89300 \div 100$

I have...
Who has...?

## 893

five hundred divided by ten

I have...
Who has...?

## fifty

## Masterful Multiplication Game

Instructions
To create these game boards, you must utilise the duplex function on your school photocopier to print double-sided pages.


The solid grey lines are cut lines.
The dashed grey lines are valley fold lines.
The dotted grey lines are mountain fold lines.
Play in groups of 3 or 4 .

1. Roll a dice.
2. Open any flap with that number on it.
3. Multiply the number on the flap by the number under the flap. Use paper or a whiteboard to write down a calculation and work it out if you need to.
4. The winner of each round is the person with the answer closest to 100.

| $\Omega$ | $\square$ |
| :---: | :---: |
| N | 5 |
| $\Omega$ | $\Omega$ |
| 5 | ( 0 |
| ( 0 | $\Omega$ |
| $\nabla$ | $\square$ |
| (0) | W |
|  | $\Omega$ |


|  |  |  |  |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  |  |  |
|  | $\underbrace{\sim}$ | $\underbrace{}_{n}$ |  |
|  | $\begin{aligned} & \square \\ & \square \sqrt{n} \end{aligned}$ | $00$ |  |
|  | $\sqrt{n}$ | $\begin{aligned} & \Omega \\ & G \end{aligned}$ |  |
|  | $\overbrace{0}^{m}$ | $0$ |  |
| REGENT STUDIES <br> Focused education on life's walk | $\square \sqrt{ }$ |  |  |

I have...

## 0.5 metres

Who has...?

## 1500m

I have...
Who has...?

## 1.5km

1.7m

I have...
Who has...?
1700 mm
3120 millimetres

I have... Who has...?

### 3.12 metres

0.902 litres

I have...
Who has...?

## 902 millilitres

50 cm

I have...
Who has...?
500 mm
58m

I have...

## 5800 cm

Who has...?
0.349 metres

I have... Who has...?

## 349 millimetres

200 millilitres

I have...

I have...

## 1500ml

Who has...?

550 cm

I have...

## 5.5 m

Who has...?
5.999 metres

I have...

5999 millimetres

Who has...?
700 mm

I have...

## 70 cm

## 7550 millimetres

I have...
Who has...?

### 7.55 metres

65 mm

I have...
Who has...?

## 6.5 cm

0.067 metres

I have...
67 millimetres

Who has...?
6000 millilitres

I have...
Who has...?

## 6 litres

## 500 g

I have...
Who has...?
0.5 kg
0.09 litres

I have...
Who has...?

## 90 millilitres

## 1000 g

I have...

Who has...?

1 kg
0.599 litres

I have...
599 millilitres

I have...

478 millimetres
Who has...?
7500 g

I have...
Who has...?

## 7.5 kg

I have...

## 0.6 metres

Who has...?
3.5 cm

I have...
Who has...?

## 35 mm

## 5 millimetres

I have...
0.005 metres

Who has...?

1000 ml

I have...

11

Who has...?

20000 millimetres

I have...

## 20 metres

Who has...?

500 millimetres

## Measure Match Loop Cards Answers

| Question | Answer |
| :---: | :---: |
| 500 millimetres | 0.5 metres |
| 1500m | 1.5 km |
| 1.7 m | 1700 mm |
| 3120 millimetres | 3.12 metres |
| 0.902 litres | 902 millilitres |
| 50 cm | 500 mm |
| 58m | 5800 cm |
| 0.349 metres | 349 millimetres |
| 200 millilitres | 0.2 litres |
| 1.51 | 1500 ml |
| 550 cm | 5.5 m |
| 5.999 metres | 5999 millimetres |
| 700 mm | 70 cm |
| 7550 millimetres | 7.55 metres |
| 65 mm | 6.5 cm |
| 0.067 metres | 67 millimetres |
| 6000 millilitres | 6 litres |
| 500 g | 0.5 kg |
| 0.09 litres | 90 millilitres |
| 1000g | 1 kg |
| 0.599 litres | 599 millilitres |
| 0.478 metres | 478 millimetres |
| 7500 g | 7.5 kg |
| 600 millimetres | 0.6 metres |
| 3.5 cm | 35 mm |
| 5 millimetres | 0.005 metres |
| 1000ml | 11 |
| 20000 millimetres | 20 metres |

## Multiples

To identify multiples of numbers.

1) Colour a stripe of the number balloons below according to each number they are a multiple of.

| Multiple of: | Colour |
| :---: | :--- |
| 2 | yellow |
| 3 | red |
| 4 | orange |
| 5 | blue |
| 10 | green |


2) Which balloons have been coloured more than one colour?
$\qquad$
3) What is the term used to describe these numbers?
4) Which of the balloons have only been coloured once?

## Multiples

To identify multiples of numbers.
000

1) Match the number to the rule. The first one has been done for you.

2) Fill in the table below with five possible multiples greater than 50 for each number.

| Times Table | Multiple |  |  |  |  |
| :---: | :---: | :--- | :--- | :--- | :--- |
| 3 |  |  |  |  |  |
| 4 |  |  |  |  |  |
| 6 |  |  |  |  |  |
| 8 |  |  |  |  |  |
| 8 |  |  |  |  |  |

3) a) Sort your answers from question 2 into the correct column.

Hint: Some numbers might appear in more than one column.

| Multiples of 3 | Multiples of 4 | Multiples of 6 | Multiples of 9 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

a) Sort the 3-digit numbers below into the correct column.

You may want to use the rules from question 1 to help you.

4) Which of the common multiples in the table above can be found in all 4 columns?
5) Can you find any other numbers which are common multiples of 3, 4, 6 and 8?

## Multiples

To identify multiples of numbers.
000

1) Match the number to the rule. The first one has been done for you.

2) Fill in the table below with five possible 3-digit multiples for each number.

| Times Table | Multiple |  |  |  |  |
| :---: | :--- | :--- | :--- | :--- | :--- |
| 3 |  |  |  |  |  |
| 5 |  |  |  |  |  |
| 7 |  |  |  |  |  |
| 9 |  |  |  |  |  |
| 9 |  |  |  |  |  |

3) a) Sort your answers from question 2 into the correct column.

Hint: Some numbers might appear in more than one column.

| Multiples of 3 | Multiples of 5 | Multiples of 7 | Multiples of 9 |
| :--- | :--- | :--- | :--- |
|  |  |  |  |
|  |  |  |  |

a) Sort the 3-digit numbers below into the correct column.

You may want to use the rules from question 1 to help you.

4) Which of the common multiples in the table above can be found in all 4 columns?
5) True or false: All multiples of 3 are also multiples of 9 . Prove it.
$\qquad$
$\qquad$
$\qquad$

## Multiples Answers

1) Colour a stripe of the number balloons below according to each number they are a multiple of.

| Multiple of: | Colour |
| :---: | :--- |
| 2 | yellow |
| 3 | red |
| 4 | orange |
| 5 | blue |
| 10 | green |



50


## Multiples Answers

1) Match the number to the rule. The first one has been done for you.

2) Fill in the table below with five possible multiples greater than 50 for each number.

| Times Table | Multiple |
| :---: | :---: |
| 3 | Multiple answers possible. |
| 4 | Multiple answers possible. |
| 6 | Multiple answers possible. |
| 8 | Multiple answers possible. |

3) 

a) Sort your answers from question 2 into the correct column.

Children will have added their answers from the previous question to the correct column.
b) Sort the 3-digit numbers below into the correct column. You may want to use the rules from question 1 to help you.

| Multiples of 3 | Multiples of 4 | Multiples of 6 | Multiples of 9 |
| :---: | :---: | :---: | :---: |
| 144 | 144 | 144 | 144 |
| 246 | 276 | 246 | 378 |
| 276 | 640 | 276 | 720 |
| 378 | 720 | 378 |  |
| 417 | 852 | 852 |  |
| 720 | 888 | 888 |  |
| 852 |  |  |  |
| 988 |  |  |  |

4) Which of the common multiples in the table above can be found in all 4 columns? 144, 720
5) Can you find any other numbers which are common multiples of $3,4,6$ and 8 ? Answers will vary but may include: 120, 144, 168, 192, 216, 240 (numbers follow the pattern of +24).

## Multiples Answers

1) Match the number to the rule. The first one has been done for you.

2) Fill in the table below with five possible 3-digit multiples for each number.

| Times Table | Multiple |
| :---: | :---: |
| 3 | Multiple answers possible. |
| 5 | Multiple answers possible. |
| 7 | Multiple answers possible. |
| 9 | Multiple answers possible. |

3) 

a) Sort your answers from question 2 into the correct column.

Children will have added their answers from the previous question to the correct column.
b) Sort the 3-digit numbers below into the correct column.

You may want to use the rules from question 1 to help you.

| Multiples of 3 | Multiples of 5 | Multiples of 7 | Multiples of 9 |
| :---: | :---: | :---: | :---: |
| 117 | 135 | 497 | 117 |
| 135 | 300 | 546 | 135 |
| 300 | 630 | 630 | 414 |
| 414 | 720 | 693 | 630 |
| 546 | 900 |  | 693 |
| 630 |  |  | 900 |
| 720 |  |  |  |
| 900 |  |  |  |

4) Which of the common multiples in the table above can be found in all 4 columns? 630
5) True or false: All multiples of 3 are also multiples of 9 . Prove it.

False. All multiples of 9 are multiples of 3 but not all multiples of 3 are multiples of 9 .
For example, 300 is a multiple of 3 because $300 \div 3=100$ but 300 cannot be a multiple of 9 as $300 \div 9=33.3333$


## Time Match-Up Cards

Teacher note: These cards get progressively harder, allowing you to add some differentiation into this activity. The cards with bold text don't require any multiplication or division.


| 45 certhuries | 3 clecardes | 3 mitlennia |
| :---: | :---: | :---: |
| L00 gears | 60 years | 3000 geaps |
| 52 centuries | 60 decades | 30 millemia |


| 5200 years | 600 years | 30000 gears |
| :---: | :---: | :---: |
| 120 centuries | 32 decades | 37 midemmias |
| 22000 gears | 320 gears | 39000 grass |



I have...
Who has...?

$2 \times 4$

I have...
Who has...?
six groups of seven

I have...


Who has...?

## four times eleven

I have...

Who has...?
$10 \times 12$

I have...
Who has...?
twelve groups of eleven

I have...
Who has...?


## four lots of nine

I have...
Who has...?


$$
3 \times 8
$$



# two groups <br> of six 

I have...
Who has...?


## nine times <br> nine

I have...
Who has...?

$$
\text { (0) } 0\}
$$

$5 \times 4$

I have...


I have...
Who has...?

## ten lots <br> of three

I have...
Who has...?

## $5 \times 10$

I have...


Who has...?
seven groups of eleven

I have...

nine times eight

I have...

Who has...?
$5 \times 11$

I have...
Who has...?


## ten groups of eight

I have...
Who has...?

three groups of two

I have...
Who has...?

$$
7 \times 3
$$

I have...


Who has...?
seven groups of five

I have...
Who has...?

one times five

I have...
Who has...?


I have...


Who has...?

## nine groups of three

I have..


Who has...?

> eight lots
> of five

I have...
Who has...?

## 430

I have...


Who has...?

## twelve groups of four

I have...

G30

Who has...?

## eight times two

I have...

Who has...?

## $10 \times 9$

I have...
Who has...?


## eight groups of seven

I have...
Who has...?


## eight lots of twelve

## What a Mess!

Oh no! I'm so clumsy! I've just spilt chocolate sauce all over my multiplication square. Can you fill in the missing numbers for me?


What a Mess!
Oh no! I'm so clumsy! I've just spilt chocolate sauce all over my multiplication square. Can you fill in the missing numbers for me?

| $\times$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 2 | 3 | 4 |  |  | 3 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 |  |  | 22 | 24 |
| 3 | 3 | 6 | 10 | 12 | 15 | 18 |  |  |  |  | 33 | 36 |
| 4 | 4 | 8 |  |  | 20 | 24 | 28 |  |  | 40 | 44 | 48 |
| 5 | 5 | 10 | 15. | 20 | 25 | 30 | 35 | 40 | 45 |  |  | 0 |
| 6 | 6 |  |  |  |  |  | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 |  | S | 49 |  |  | 70 |  |  |
| 8 | 9 | 16 |  |  |  |  | 56 |  |  | 80 | $88$ | $96$ |
| 9 | 9 | 18 | 27 | 36 | 45 |  |  | $72$ | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 |  |  | 50 | 60 | 70 | 80 | 0 | 100 | 110 | 12 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77. | 88 |  |  |  |  |
| 12 | 12 |  |  | $8$ |  | , |  |  |  | 120 | 132 | 14 |

R RECENTSTUDES

## What a Mess! Answers

| $\times$ | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| 3 | 3 | 6 | 10 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 18 | 20 | 24 | 28 | 32 | 36 | 40 | 44 | 48 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 | 70 | 77 | 84 |
| 8 | 9 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 | 90 | 99 | 108 |
| 10 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 |
| 11 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 110 | 121 | 132 |
| 12 | 12 | 24 | 36 | 48 | 60 | 72 | 84 | 96 | 108 | 120 | 132 | 144 |

