# <u>My journey to become a</u> <u>Superkero of Matks</u>



So you have decided to start your journey to becoming a Master of Maths then? Well, you have come to the right place!

This book should help you to train the skills you need to beat each hero. If you have a spare minute, work on some of the activities in order to make you stronger at maths! Remember though, these are just a few suggestions; there is a whole host of things you, your teachers or parents can also do to help you become the best you can be!

When you beat each Hero, stick your certificate into your book so you can keep track of how far along the journey you are.

With the right amount of training, it will not be long until you have defeated all the Heroes to become a Master of Maths!

Good luck brave warrior!

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# **TRAIN TO BEAT BATMAN!**

TRY OUT THESE ACTIVITIES WHILE YOU ARE TRAINING; SOME PEOPLE'S LEARNING STYLES ARE DIFFERENT AND THESE MIGHT HELP YOU CRACK IT!

### SING UP!

Think of your favourite song. Got it? Now use the tune to create a song about the times table you are training for. Share it with your friends and see if you can help them too!

### TIMES TABLE HOP!

Grab a bean bag and throw it as far as you can on the playground. Jump to collect it, counting in 2, 5 or 10 as you go!

### BARMY ARMY!

Count how many people are on your table. Use your times table knowledge to work out how many arms there is altogether. What about the whole class?

### HOLY TOE-LY!

Use your 10 times table knowledge to work out how many toes there are in total at your table. Can you work out how many in the class? What about fingers and toes?

#### TAKE YOUR CHANCES, ROLL THE DICE!

Get a ten-sided dice and a training partner. Choose a times table to practise and roll the dice.Whatever it lands on you need to multiply.

#### FASTER THAN A COMPUTER!

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Your partner uses a calculator while you use your mind.Who can get to the answer quickest?

### FINGER LICKING GOOD!

Use your five times table knowledge to work out how many fingers there are in total at your table. Can you work out how many in the class?

#### LOOK WHO'S TALKING!

Can you do a funny accent? Now's the time to show it off! Go through the times tables in the strangest accent you can think of. Which of your friends is the funniest?



### Early Multiplication Multiplying By Two

## 2

Fill in the missing multiples of two in the spiral below:



			-	-	-	-			
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

#### Color the multiples of 2:

Match pairs of equivalent numbers and formulas:

2 × 0	4	1 x 2	0
2 x 1	8	0 x 2	2 + 2 + 2 + 2
2 x 2	0	2 x 2	2
2 x 3	2	3 x 2	2 + 2
2 x 4	12	4 x 2	2 + 2 + 2
2 x 5	6	5 x 2	2 + 2 +2 + 2 + 2
2 x 6	10	6 x 2	2 + 2 + 2 + 2 + 2 + 2 + 2
2 x 7	16	10 x 2	2 + 2 + 2 + 2 + 2 + 2
2 x 8	18	7 x 2	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 +
2 x 9	20	8 x 2	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2 + 2
2 x 10	14	9 x 2	2 + 2 + 2 + 2 + 2 + 2 + 2 + 2



### Practise the 2 times table with

### the Simpsons!







### Early Multiplication Multiplying By Five, Part 2





# Practise the 5 times table with

Garfield!



Complete:
5 x 2 =
5 x 0 =
5 x 5 =
5 x 10 =
5 x 6 =
5 x 12 =
5 x 1 =
5 x 8 =
5 x 3 =
5 x 7 =







Mad Maths Minutes	Mad Maths Minutes			
10x Table Pictures Set A	10x Table Pictures Set B			



### 2x Table Coins (2 x ?)

• Look at each set of pictures. Write the repeated addition and multiplication.









### Multiplying with 10

Rainbow

10x9	9x10	9x10	10x9	10x9	10x9	10x9	9x10	10x9	10x9
10x10	9x10	9x10	10x10	10x10	9x10	10x10	10x10	10x3	3x10
10x10	9x10	10x9	9x10	10x10	10x10	4x10	4x10	10x1	2x10
10x10	10x9	9x10	10x9	10x4	4x10	1x10	1x10	5x10	10x6
9x10	10x9	10x10	3x10	1x10	2x10	5x10	5x10	7x10	10x8
10x10	10x9	3x10	10x1	6x10	10x5	7x10	10x8	9x10	10x9
9x10	10x9	4x10	2x10	10x6	10x8	9x10	9x10	10x9	10x10
9x10	10x4	10x2	5x10	10x8	9x10	10x10	10x10	10x9	10x10
9x10	4x10	10x1	5x10	10x7	10x9	9x10	10x9	9x10	10x9
9x10	3x10	10x1	6x10	10x7	10x10	10x9	10x9	10x9	9x10

### Key:

10 or 20	Orange
30 or 40	Red
50 or 60	Green
70 or 80	Yellow
90 or 100	Blue

Jf yon think yon have trained hard enough to beat Batman then speak to your teacher; your enemy awaits!



Jf you win, then stick your certificate here and write about what you are good at and what you found tricky in the space below



## **TRAIN TO BEAT HAWK-GIRL!**

TRY OUT THESE ACTIVITIES WHILE YOU ARE TRAINING; SOME PEOPLE'S LEARNING STYLES ARE DIFFERENT AND THESE MIGHT HELP YOU CRACK IT!

### HOT POTATO!

Grab a bean-bag and some friends. Pass the bean-bag around and call out the times table you are practicing. Anyone who is too slow is eliminated until only the winner is left!

### WHOLE OR NOT?

Grab some number cubes and some paper. Chose a random number of cubes (write down how many) and see how many groups of 3 or 4 you can make. Are there any left over? Notice any patterns?

### **RAP ATTACK!**

So you can sing your 2, 5 and 10 times table, how about you try rapping your 3 and 4 times? Maybe you could even make actions to go along with it.

### FOOTY FANATICS!

Tired of the same score lines in footy? Change the scoring rules! Every time your team completes a pass, call out the next number from the 3 or 4 times table. If you complete the table you get to add another goal to your score! But beware, so does the other team!

### LOOK WHO'S TALKING!

Can you do a funny accent? Now's the time to show it off! Go through the times tables in the strangest accent you can think of. Which of your friends is the funniest?

### FOUR ON THE FLOOR!

A chair has four legs; can you use your times table knowledge to work out how many chair-legs are in the room? How about finding out the number of wheels on the cars in the car park?

### TAKE YOUR CHANCES, ROLL THE DICE!

Get a ten-sided dice and a training partner. Choose a times table to practice and roll the dice. Whatever it lands on you need to multiply!

### FASTER THAN A COMPUTER!

Your partner uses a calculator while you use your mind. Who can get to the answer quickest?



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# Early Multiplication Multiplying By Three



Fill in the missing multiples of three in the spiral below:



1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	9 <b>0</b>
91	92	93	94	95	96	97	98	99	100

Color the multiples of 3: 

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Match the equivalent numbers and formulas:

3 x 0	0	1 x 3	0
3 x 1	12	0 x 3	3 + 3 + 3 + 3
3 x 2	3	2 x 3	3
3 x 3	6	3 x 3	3 + 3
3 x 4	18	4 x 3	3 + 3 + 3
3 x 5	9	5 x 3	3 + 3 + 3 + 3 + 3
3 x 6	15	6 x 3	3 + 3 + 3 + 3 + 3 + 3 + 3
3 x 7	24	10 x 3	3 + 3 + 3 + 3 + 3 + 3
3 x 8	27	7 x 3	3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 +
3 x 9	30	8 x 3	3 + 3 + 3 + 3 + 3 + 3 + 3 + 3 + 3
3 x 10	21	9 x 3	3 + 3 + 3 + 3 + 3 + 3 + 3 + 3



### Practise the 3 times table with

Mickey!



Fill in the 3 times tables:					
3	3	3			
× 1	x 6	x 0			
3	3	3			
× 10	× 4	× 9			
3	3	3			
x 7	x 12	x 2			
3	3	3			
x 8	x 3	x 5			

Where does Mickey's golf ball end up? He only aims for the products of the 3 times table. Color these holes.



### Word Problems

- Mickey receives 3 marbles every week. How many marbles does he have after 6 weeks?

- Mickey visits Minnie Mouse 3 times a day. How many visits did he bring in 11 days?

### Complete.

- 3 × \_\_\_\_ = 12
- 3 × \_\_\_\_ = 0
- 3 × \_\_\_\_= 9
- 3 × \_\_\_\_ = 21
- 3 × \_\_\_\_ = 15













### Multiplication Arrays (2)

• Draw an array to go with each of the following multiplication calculations. Work out the answer.



• Some of the other arrays can be written using another multiplication calculation. Write them in.

### TRAIN TO BEAT HAWK-GIRL!

### Multiplying with 4

Surfer

	, 0								
4x7	4x7	7x4	4x8	8x4	4x9	3x4	4x9	4x9	10x4
7x4	4x8	8x4	9x4	4x9	5x4	5x4	5x4	4x9	4x9
4x8	7x4	4x10	9x4	4x10	4x10	6x4	4x10	9x4	4x10
4x7	4x10	9x4	4x9	9x4	4x4	4x4	3x4	4x9	4x10
8x4	4x10	10x4	4x9	10x4	4x5	4x9	4x6	4x9	9x4
4x8	10x4	9x4	4x10	4x4	4x3	4x4	4x4		10x4
4x8	10x4	4x10	9x4	4x10	4x9	9x4	4x2		9x4
8x4	8x4	4x10	9x4	10x4	4x10	4x10	9x4	4x2	
4x8	8x4	7x4	4x10	4x10	10x4	4x10	9x4		1x4
4x8	4x8	8x4	4x7	4x7	9x4	4x9	4x9	1x4	4x9

Key:

/		
4 or 8	Black	
12 or 16	Yellow	
20 or 24	Gray	
28 or 32	Blue	
36 or 40	Red	*Blank squares are white



Mad Maths Minutes						Μ	ad	Maths	Mi	nu	tes						
		3	Bx To	able Prac	ctic	e S	et A	4			3:	x Ta	ble Prac	tice	e Se	et B	
3		х	9	=	7	х	3	=		2	Х	3	=	3	Х	5	=
3		Х	3	=	3	Х	1	=		3	Х	6	=	3	Х	10	=
1	0	Х	3	=	2	Х	3	=		3	Х	2	=	9	Х	3	=
3		Х	7	=	3	Х	6	=		1	Х	3	=	6	Х	3	=
3		Х	9	=	1	Х	3	=		3	Х	4	=	7	Х	3	=
6		Х	3	=	3	Х	5	=		5	Х	3	=	3	Х	1	=
4		Х	3	=	3	Х	3	=		3	Х	8	=	3	Х	9	=
2		Х	3	=	8	Х	3	=		3	Х	7	=	3	Х	3	=
3		Х	10	=	3	Х	0	=		3	Х	2	=	3	Х	6	=
3		Х	5	=	4	Х	3	=		10	X	3	=	0	Х	3	=
3		Х	4	=	3	Х	7	=		3	Х	4	=	8	Х	3	=
6		Х	3	=	8	Х	3	=		3	Х	0	=	4	Х	3	=
0		Х	3	=	3	Х	2	=		7	Х	3	=	9	Х	3	=
3		Х	1	=	3	Х	8	=		5	Х	3	=	3	Х	3	=
9		Х	3	=	5	Х	3	=		3	Х	8	=	1	Х	3	=



Mad Math	s Minutes	Mad Maths Minutes
4x Table Pra	ctice Set A	4x Table Practice Set B
4 x 2 =	8 x 4 =	4 x 9 = 4 x 3 =
3 x 4 =	5 x 4 =	4 x 8 = 10 x 4 =
4 x 3 =	4 x 6 =	5 x 4 = 0 x 4 =
9 x 4 =	1 x 4 =	7 x 4 = 4 x 4 =
4 x 10 =	7 x 4 =	4 x 7 = 4 x 10 =
6 x 4 =	9 x 4 =	4 x 1 = 2 x 4 =
4 x 9 =	4 x 4 =	4 x 5 = 3 x 4 =
4 x 7 =	10x 4 =	4 x 4 = 8 x 4 =
0 x 4 =	1 x 4 =	1 x 4 = 4 x 2 =
4 x 6 =	4 x 3 =	9 x 4 = 4 x 8 =
4 x 8 =	4 x 9 =	4 x 5 = 6 x 4 =
4 x 4 =	4 x 0 =	6 x 4 = 10 x 4 =
3 x 4 =	2 x 4 =	2 x 4 = 8 x 4 =
5 x 4 =	7 x 4 =	4 x 7 = 4 x 6 =
4 x 1 =	4 x 5 =	4 x 0 = 4 x 4 =

Jf yon think yon have trained hard enough to beat Hawk-Girl then speak to your teacher; your enemy awaits!



Jf yon win, then stick your certificate here and write about what you are good at and what you found tricky in the space below



# TRAIN TO BEAT THOR

TRY OUT THESE ACTIVITIES WHILE YOU ARE TRAINING; SOME PEOPLE'S LEARNING STYLES ARE DIFFERENT AND THESE MIGHT HELP YOU CRACK IT!



#### ΗΟΤ ΡΟΤΑΤΟ!

Grab a bean bag and some friends. You know the game so make it a bit trickier by calling out the tables backwards as well! Anyone who is too slow is eliminated until only the winner is left!

#### FOURS AND EIGHTS ARE MATES!

Get some number cubes and group them into fours. How many groups of four can you make? What is the total? Now try changing that number to groups of eight.What do you notice? What happens when you change it to groups of 2?

### **7 HEAVEN!**

Ask your teacher for a number square. Colour in all the multiples of seven you know (3x7, 2x7, 10x7, etc.) is there a pattern? Can you find our other numbers in the 7 times table? How about you colour in your other times tables. What do you notice?

#### **TIMES TABLE HOP!**

Grab a bean bag and throw it as far as you can on the playground. Jump to collect it, counting in 6, 7, or 8 as you go!

### SIX TRIX!

Grad some number cubes and group them, into sixes.What is the total of 2 groups? 3 groups? More groups? Try to make as many groups as you can to get the highest total.What happens when you split them into groups of three? How many groups of three are there?

#### **STORY TIME!**

Can you make a story about the multiples in your tables? For example: There once was a lonely old fella called 7, he was cold, old and mean. Along came a friend (fourteen) and asked him out to play. "Come on", he said, "it will be fun - we can meet up with crazy 21!"

#### **FOOTBALL FANATICS!**

Tired of the same old score lines in footy? Change the scoring rules! Every time your team completes a pass, call our the next number from the 6, 7 or 8 times table. If you complete the table you get to add another goal to your score! But beware, so does other teams!

### Early Multiplication Multiplying By Six, Part 2





Practise the 7 times table with



	Con	nplete the	: 7 times t	able	
7	7	7	7	7	7
<u>× 4</u>	x 12	× 9	x 5	x 2	× 10
7 <u>× 8</u>	7 × 1	7 <u>× 11</u>	7 3	7 × 9	7 x 3

Find the missing number and make 2 multiplications.



### Early Multiplication Multiplying By Eight, Part 2





# Practise the 6 times table with





Complete the table:



Write the answers:		
6 x 6 =	6 x 1 =	6 × 11 =
6 x 4 =	6 × 10 =	6 x 9 =
6 x 7 =	6 x 5 =	6 x 2 =
6 x 8 =	6 x 3 =	6 x 12 =

(IIIIIII Color	the	products	of	the 6 ti	imes table.		
		36	9	24	12		60
26		72		16	18	42	



### Early Multiplication Multiplying By Seven



of seven in the spiral below:



10
20
30
40
50
60
70
80
9 <b>0</b>
100

Color the multiples of 7:

Match the equivalent numbers and formulas:

7 x 0	21	1 x 7	<b>0</b>
7 x 1	0	0 x 7	ومتاين دمينان
7 x 2	28	2 x 7	chanted L
7 x 3	7	3 x 7	7+7 ☺
7 x 4	14	4 x 7	7 + 7 + 7
7 x 5	49	5 x 7	7 + 7 + 7 + 7 + 7
7 x 6	35	6 x 7	7 + 7 + 7 + 7 + 7 + 7 + 7
7 x 7	42	10 x 7	7 + 7 + 7 + 7 + 7 + 7
7 x 8	56	7 x 7	7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7
7 x 9	70	8 x 7	7 + 7 + 7 + 7 + 7 + 7 + 7 + 7 + 7
7 x 10	63	9 x 7	7 + 7 + 7 + 7 + 7 + 7 + 7 + 7



### Practise the 8 times table with

Winnie the Pooh!



Who gets what ? Connect the dots.



What number is missing? Make 2 multiplications.



	F	ill in the 8	times tak	ole:	
8	8	8	8	8	8
<u>× 9</u>	× 11	× 0	x 6	× 10	× 5
8 × 3	8 × 12	8 × 1	8 × 7	8 × 2	8 × 8



### **Multi-Squares**

Zeros - Sixes

Put the correct number in each box so the horizontal  $\langle - \rangle$  and vertical  $\widehat{1}$  product are correct.





Х

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Χ

15

Χ

42

30

21

е

























### Multi-Squares Z

Zeros -Eights

Put the correct number in each box so the horizontal  $\langle - \rangle$  and vertical  $\hat{1}$  product are correct.





35

64

·X

56

























Jf yon think yon have trained hard enough to beat Thors' mighty hammer then speak to your teacher.



Jf you win, then stick your certificate here and write about what you are good at and what you found tricky in the space below



# TRAIN TO BEAT BLACK WIDOW

TRY OUT THESE ACTIVITIES WHILE YOU ARE TRAINING; SOME PEOPLE'S LEARNING STYLES ARE DIFFERENT AND THESE MIGHT HELP YOU CRACK IT!



### SKIP TO THE BEAT!

Grab a skipping rope at playtime. Can you count through your times table each time you skip? Can you make it to the end without a mistake? How about backwards?

#### **DUELING PARTNERS!**

Grab a partner for this next one! You say a times table and they have to answer it. If they get it right then they ask you one in return. The first one to answer wrongly loses a life!

### HANDBALL!

Want a different way to play handball? Count through your times tables as you play; the first person to get to the end gets an extra life!



### TAKE YOUR CHANCES, ROLL THE DICE!

Get a ten-sided dice and a training partner. Choose a times table to practise and roll the dice.Whatever it lands on you need to multiply!

### WHOLE OR NOT?

Grab some number cubes and some paper. Choose a random number of cubes (write down how many) and see how many groups of 9, 11 or 12 you can make.Are there any left over? Notice any patterns?

#### QUICK ON THE DRAW!

Find a partner and face them. Count down from three and when you get to 0 each person has to quickly pull their hands from behind their back and show some of their fingers. The winner is the person who can multiply both amounts of fingers together the fastest!

### TRAIN TO BEAT BLACK WIDOW!

### Early Multiplication Multiplying By Nine, Part 2





# RAIN TO BEAT

### Practise the 9 times table with

Bono!



#### Word problems! (

( friends Olaf, Flo en Jeep Sheep 🎽 receive 9 letters each. How many

letters does Bono deliver?

@Multiplication: \_\_\_\_\_

Answer:



((() Solution is getting married and places tables for the party. Each table seats 9 friends.

There is a total of 8 tables. How many

friends will attend the wedding?

@Multiplication: \_\_\_\_\_

Answer:



Fill in:
9 × 9 =
9 × 10 =
9 × 1 =
9 × 7 =
9 x 12 =
9 × 3 =
9 × 4 =
9 x 6 =
9 × 0 =
9 × 5 =
9 × 8 =
9 x 2 =
9 × 11 =
### Red Bird- Close Up

1x8	1x3	3x5	2x8	1x4	9x1	8x2	2x10	4x3	1x5	2x10	3x4	1x1	3x6	4x1	4x4	3x2	2x2	4x3
7x2	8x2	6x2	6x1	9x1	2x6	2x1	3x2	2x5	2x1	1x9	1x8	4x3	1x7	1x7	1x4	2x7	1x1	2x2
1x9	7x1	10x1	3x1	5x1	3x3	9x2	1x10	2x3	2x3	4x3	1x4	2x9	10x1	2x1	5x2	2x9	2x8	5x1
5x3	2x2	7x6	7x6	9x6	6x8	1x1	10x2	4x4	6x2	1x4	5x4	3x5	2x1	7x6	7x8	6x8	1x8	4x5
2x10	4x5	7x7	10x6	9x6	5x10	9x5	10x6	5x10	2x8	6x9	5x10	8x6	7x6	7x7	8x6	7x8	3x6	10x2
5x4	5x2	3x1	1x10	2x2	6x8	7x8	9x6	9x6	6x3	8x6	9x5	10x6	7x7	9x1	4x5	2x10	3x1	2x4
2x10	2x4	2x10	3x1						1x9						4x4	2x8	2x2	7x1
3x3	2x9	3x1	7x1						4x4						10x2	4x5	2x4	2x6
1x10	3x2	2x10	3x2				7x8		4x2		6x7				3x4	1x5	9x2	8x2
4x5	2x3	4x3	5x3				7x6		8x1		8x6				3x4	2x5	9x2	4x2
4x5	7x2	1x7	10x2	1x6					3x1					9x1	8x1	2x7	10x1	7x1
2x1	2x8	1x2	3x2	1x10	5x3	4x1	1x6	1x5	10x8	8x10	2x5	2x10	1x2	10x1	3x5	2x2	1x8	3x5
3x4	1x2	6x3	2x2	9x2	10x2	2x10	5x3	8x2	7x9	8x8	9x7	7x9	10x7	1x8	9x2	3x5	5x4	1x6
3x1	2x3	9x2	4x3	10x2	1x7	1x10	10x2	2x7	9x7	8x8	10x9	8x10	10x10	7x10	8x8	2x10	2x8	2x7
1x6	2x7	2x10	3x2	6x6	5x6	5x5	3x9	3x8			9x7	9x10	8x8	1x1	9x2	7x2	1x1	1x4
4x1	4x9	6x5	5x6	6x5	6x4	5x8	3x10	7x5	8x9	7x9	9x9	8x9	6x5	3x7	8x5	4x7	3x4	4x1
4x8	7x5	8x4	7x5	3x10	5x6	8x4	4x10	4x6	8x9	5x6	9x4	3x10	6x4	3x8	10x4	3x8	3x10	7x2
4x9	5x8	8x3	9x4	10x4	8x3	5x6	10x3	4x9	7x3	7x4	7x4	4x6	10x3	9x4	7x4	4x10	5x8	10x3
9x4	10x3	10x4	7x5	8x5	4x7	6x6	3x9	5x7	4x7	3x9	7x4	6x4	4x7	9x3	8x5	7x3	7x3	10x3
6x6	6x4	3x7	4x7	5x8	5x6	6x4	4x7	5x6	8x3	7x5	5x6	7x3	10x4	3x7	9x3	7x5	10x4	4x9

### Key:

1-20	Red
21-40	Tan
41-60	Black
61-100	Orange

### Multi-Squares

Zeros - Nines

Put the correct number in each box so the horizontal  $\langle -- \rangle$  and vertical  $\hat{\downarrow}$  product are correct.

b





































### Practise the 12 times table with Spongebob!





### Early Multiplication Multiplying By Nine



#### Color the multiples of 9:

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

### Match the equivalent numbers and formulas:

9 x 0	27	1 x 9	0
9 x 1	0	0 x 9	9 + 9 + 9 + 9
9 x 2	36	2 x 9	9
9 x 3	9	3 x 9	9 + 9
9 x 4	18	4 x 9	9 + 9 + 9
9 x 5	63	5 x 9	9 + 9 + 9 + 9 + 9
9 x 6	45	6 x 9	9 + 9 + 9 + 9 + 9 + 9 + 9
9 x 7	54	10 x 9	9+9+9+9+9+9
9 x 8	72	7 x 9	9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9
9 x 9	90	8 x 9	9 + 9 + 9 + 9 + 9 + 9 + 9 + 9 + 9
9 x 10	81	9 x 9	9+9+9+9+9+9+9+9

### Multiplication Drill

11	11	11	11	11	11
x 10	x 11	x 0	x 5	x 6	<u>x 4</u>
11	11	11	11	11	11
x 9	<u>x 0</u>	x 3	x 3	<u>x 3</u>	x 0
11	11	11	11	11	11
x 6	<u>x 4</u>	x 7	<u>x 1</u>	<u>x 6</u>	x 11
11	11	11	11	11	11
x 7	x 12	x 8	<u>x 2</u>	<u>x 2</u>	<u>x 8</u>
11	11	11	11	11	11
x 5	<u>x 1</u>	x 5	<u>x 9</u>	<u>x 2</u>	x 0
11	11	11	11	11	11
<u>x 1</u>	x 12	<u>x 6</u>	<u>x 5</u>	<u>x 1</u>	x 9
11	11	11	11	11	11
x 4	<u>x 4</u>	x 7	x 11	x 10	x 9
11	11	11	11	11	11
x 2	<u>x 3</u>	x 11	<u>x 8</u>	x 12	<u>x 7</u>
11	11	11	11	11	11
x 1	<u>x 0</u>	x 10	<u>x 7</u>	<u>x 8</u>	x 2
11	11	11	11	11	11
x 9	<u>x 6</u>	<u>x 5</u>	x 10	<u>x 3</u>	x 10

### Multiplication Drill

12	12	12	12	12	12	12	12	12	12
x 12	x 8	x 3	x 5	x 0	x 5	x 10	x 2	x 11	x 1
12	12	12	12	12	12	12	12	12	12
x 10	x 9	x 5	x 8	x 2	x 0	x 7	x 5	x 10	x 12
12	12	12	12	12	12	12	12	12	12
x 0	x 5	x 8	x 7	x 9	x 4	x 7	x 8	x 4	x 6
12	12	12	12	12	12	12	12	12	12
x 1	x 4	x 12	x 1	x 12	x 9	x 6	x 3	x 11	x 0
12	12	12	12	12	12	12	12	12	12
x 11	x 4	x 2	x 9	x 8	x 3	x 11	x 7	x 4	x 6
12	12	12	12	12	12	12	12	12	12
x 3	x 2	x 6	x 10	x 1	x 3	x 7	x 2	x 6	x 1

Jf yon think yon have trained hard enough to overcome the baffling Black Widow then speak to your teacher.



Jf yon win, then stick your certificate here and write about what you are good at and what you found tricky in the space below



## **TRAIN TO BEAT SUPERMAN**

TRY OUT THESE ACTIVITIES WHILE YOU ARE TRAINING; SOME PEOPLE'S LEARNING STYLES ARE DIFFERENT AND THESE MIGHT HELP YOU CRACK IT!



#### **QUICK ON THE DRAW!**

Find a partnet and face them. Count down from three and when you get to 0 each person has to quickly pull their hands from behind their back and show some of their fingers. The winner is the person who can multiply both amounts of fingers together the fastest!

#### **REVERSE REVERSE!**

You should know your times tables by now; how about you write out a division table? E.g.

> 3 ÷ I = 3 6 ÷ 2 = 3

#### **BREAK DOWN!**

Grab some number cubes, as many as you like. How many are there? Can you break them down into equal groups of 3, 6, 9 or 12? What do you notice? How about groups of 2, 4 or 8? Are there any left overs?

#### **SING UP!**

ر کر ک

Think of your favourite song. Got it? Now use the tune to create a song about the times table you are training for. Share it with your friends and see if you can help them too!

#### FASTER THAN A COMPUTER!

This time with division! Choose a division sum: your partner uses a calculator while you use your mind. Who can get to the answer quickest?

#### **HOT POTATO!**

Grab a bean-bag and some friends. You know the game so make it a bit trickier by practicing your division! One person calls out a division sum and passes the potato onto the next person; if they are too slow then they are eliminated!

#### LOOK WHO'S TALKING!

Can you do a funny accent? Now's the time to show it off! Go through the division times tables in the strangest accent you can think of. Which of your friends is the funniest?

### TRAIN TO BEAT SUPERMAN!

Total number of stars =

Q. No	Number of stars in each group	Number of groups	Left over
1	4		
2	7		
3	5		
4	11		
5	8		
6	12		
7	10		
8	14		
9	9		
10	15		



AIN TO BEAT

# TRAIN TO BEAT

				In-Out Boxe	es - Division			
1)	IN	OUT	2)	IN	OUT	3)	IN	Ουτ
		2			1			3
		5			2			6
		7			5			8
	40			120			63	
	50			144			77	
	Rule: Div	vide by 5		Rule: Div	ide by 12		Rule: Di	vide by 7



IN				60	72
OUT	4	5	7		
	l	Rule: Div	ide by 6		

IN				81	108
OUT	0	3	7		
		Rule: Div	ide by 9		

7)

IN					16	18	20	22
OUT	2	3	5	6				
			Rule	: Divide b	oy 2			



## **Division Times Table - 4,6,8**

24 ÷ 8 =(1)	32 ÷ 4 =(11)	4 ÷ 4 =(21)
40 ÷ 4 =(2)	30 ÷ 6 =(12)	18 ÷ 6 =(22)
12 ÷ 4 =(3)	56 ÷ 8 =(13)	12 ÷ 4 =(23)
30 ÷ 6 =(4)	48 ÷ 8 =(14)	24 ÷ 4 =(24)
20 ÷ 4 =(5)	40 ÷ 8 =(15)	48 ÷ 8 =(25)
32 ÷ 8 =(6)	32 ÷ 4 =(16)	64 ÷ 8 =(26)
16 ÷ 8 =(7)	12 ÷ 6 =(17)	18 ÷ 6 =(27)
48 ÷ 8 =(8)	32 ÷ 8 =(18)	16 ÷ 8 =(28)
32 ÷ 8 =(9)	64 ÷ 8 =(19)	36 ÷ 4 =(29)
8 ÷ 4 =(10)	60 ÷ 6 =(20)	$4 \div 4 =(30)$

### TRAIN TO BEAT SUPERMAN!

												- 1-	·					
54÷9	42÷7	42÷7	40÷8	54÷9	45÷9	50÷10	40÷8	60÷10	36÷6	35÷7	45÷9	60÷10	10÷2	30÷6	12÷2	18÷3	15÷3	50÷10
42÷7	40÷8	48÷8	48÷8	54÷9	5÷1	5÷1	6÷1	10÷5	14÷7	30÷5	18÷3	12÷2	18÷3	30÷5	10÷2	45÷9	42÷7	15÷3
15÷3	60÷10	20÷4	42÷7	45÷9	35÷7	36÷6	10÷2	40÷8	5÷5	4÷2	12÷2	35÷7	5÷1	25÷5	25÷5	18÷3	5÷1	20÷4
6÷1	30÷5	54÷9	20÷4	50÷10	12÷2	30÷5	10÷2	36÷6	8÷8	40÷8	36÷6	30÷6	18÷3	25÷5	48÷8	50÷10	30÷6	20÷4
6÷1	48÷8	48÷8	36÷6	42÷7	30÷5	36÷6	40÷8	30÷5	24÷4	18÷3	36÷6	20÷4	25÷5	60÷10	20÷4	15÷3	24÷4	18÷3
15÷3	15÷3	60÷10	6÷2	12÷3	36÷6	24÷4	60÷10	15÷3	48÷8	30÷6	18÷3	5÷1	50÷10	30÷10	12÷3	35÷7	45÷9	48÷8
5÷1	25÷5	45÷9	6÷2	30÷10	40÷10	28÷7	5÷1	10÷2	48÷8	6÷1	12÷2	27÷9	30÷10	3÷1	18÷6	45÷9	15÷3	35÷7
24÷4	54÷9	10÷2	24÷4	40÷8	27÷9	24÷6	6÷2	6÷2	30÷6	20÷5	18÷6	16÷4	30÷10	40÷8	45÷9	15÷3	18÷3	54÷9
30÷6	5÷1	25÷5					16÷4	3÷1	42÷7	9÷3	9÷3				40÷8	35÷7	36÷6	18÷3
20÷4	42÷7	60÷10				20÷10		36÷6	48÷8	50÷10		4÷2			36÷6	5÷1	36÷6	20÷4
20÷4	48÷8	5÷1						35÷7	6÷1	48÷8					60÷10	40÷8	54÷9	25÷5
40÷8	30÷5	12÷2	10÷2				60÷10	40÷8	40÷8	6÷1	6÷1			10÷2	6÷1	36÷6	10÷2	18÷3
12÷2	15÷3	15÷3	45÷9	35÷7	42÷7	45÷9	6÷1	30÷10	27÷9	24÷6	12÷4	8÷2	4÷1	27÷9	3÷1	24÷4	5÷1	30÷6
48÷8	30÷5	45÷9	15÷3	15÷3	5÷1	25÷5	30÷6	20÷5	30÷10	40÷10	12÷3	21÷7	6÷2	12÷4	15÷3	6÷1	40÷8	45÷9
5÷1	35÷7	20÷4	35÷7	20÷4	15÷3	12÷2	60÷10	24÷8	4÷1	21÷7	16÷4	12÷4	6÷1	48÷8	12÷2	18÷3	25÷5	18÷3
54÷9	60÷10	25÷5	50÷10	15÷3	48÷8	50÷10	5÷1	30÷10	40÷10	36÷6	48÷8	60÷10	42÷7	30÷6	10÷2	5÷1	35÷7	60÷10
18÷3	45÷9	20÷4	60÷10	10÷2	10÷2	20÷4	30÷6	48÷8	24÷4	30÷5	15÷3	20÷4	36÷6	30÷5	48÷8	18÷3	42÷7	48÷8
25÷5	54÷9	24÷4	30÷6	5÷1	5÷1	24÷4	20÷4	30÷5	35÷7	36÷6	18÷3	24÷4	40÷8	30÷5	50÷10	15÷3	30÷5	45÷9
40÷8	6÷1	48÷8	50÷10	35÷7	10÷2	25÷5	45÷9	48÷8	42÷7	24÷4	36÷6	25÷5	10÷2	54÷9	30÷6	15÷3	15÷3	48÷8
36÷6	50÷10	60÷10	6÷1	25÷5	54÷9	35÷7	20÷4	24÷4	18÷3	18÷3	25÷5	5÷1	10÷2	36÷6	20÷4	36÷6	36÷6	50÷10

### Yellow Bird- Close Up

Key:

1,2Black3,4Red-Orange5,6Yellow

\*Blank squares are white



### **Division Times Table - 6,7,8,9**

45 ÷ 9 =(1)	6 ÷ 6 =(11)	72 ÷ 9 =(21)
21 ÷ 7 =(2)	42 ÷ 7 =(12)	54 ÷ 9 =(22)
60 ÷ 6 =(3)	12 ÷ 6 =(13)	30 ÷ 6 =(23)
63 ÷ 7 =(4)	45 ÷ 9 =(14)	81 ÷ 9 =(24)
32 ÷ 8 =(5)	18 ÷ 6 =(15)	40 ÷ 8 =(25)
72 ÷ 9 =(6)	40 ÷ 8 =(16)	63 ÷ 7 =(26)
42 ÷ 6 =(7)	48 ÷ 6 =(17)	49 ÷ 7 =(27)
16 ÷ 8 =(8)	35 ÷ 7 =(18)	72 ÷ 9 =(28)
32 ÷ 8 =(9)	24 ÷ 8 =(19)	24 ÷ 6 =(29)
56 ÷ 8 =(10)	81 ÷ 9 =(20)	70 ÷ 7 =(30)



### **Division and Multiplication Mix - 11**

11 x 2 =(1)	2 x 11 =(11)	44 ÷ 11 =(21)
11 x 1 =(2)	11 x 5 =(12)	3 x 11 =(22)
11 x 7 =(3)	110 ÷ 11 =(13)	11 x 0 =(23)
22 ÷ 11 =(4)	11 x 4 =(14)	11 x 8 =(24)
11 x 2 =(5)	11 x 4 =(15)	110 ÷ 11 =(25)
99 ÷ 11 =(6)	33 ÷ 11 =(16)	11 ÷ 11 =(26)
11 x 2 =(7)	44 ÷ 11 =(17)	22 ÷ 11 =(27)
55 ÷ 11 =(8)	110 ÷ 11 =(18)	8 x 11 =(28)
77 ÷ 11 =(9)	88 ÷ 11 =(19)	22 ÷ 11 =(29)
11 ÷ 11 =(10)	11 x 7 =(20)	9 x 11 =(30)



### **Division and Multiplication Mix - 12**

48 ÷ 12 =(1)	108 ÷ 12 =(11)	36 ÷ 12 =(21)
120 ÷ 12 =(2)	72 ÷ 12 =(12)	12 x 10 =(22)
9 x 12 =(3)	120 ÷ 12 =(13)	24 ÷ 12 =(23)
12 x 3 =(4)	48 ÷ 12 =(14)	108 ÷ 12 =(24)
12 x 7 =(5)	48 ÷ 12 =(15)	108 ÷ 12 =(25)
12 ÷ 12 =(6)	12 x 2 =(16)	12 ÷ 12 =(26)
12 x 8 =(7)	5 x 12 =(17)	5 x 12 =(27)
48 ÷ 12 =(8)	60 ÷ 12 =(18)	36 ÷ 12 =(28)
12 x 9 =(9)	120 ÷ 12 =(19)	108 ÷ 12 =(29)
$2 \times 12 = (10)$	12 ÷ 12 =(20)	2 x 12 =(30)

Jf yon think yon have trained hard enough to overcome the amazing Superman then speak to your teacher... he is waiting...



Jf you win, then stick your certificate here and reflect on any areas you are strong at or may need to work on before you move forward.



# TRAIN TO BEAT CATWOMAN

ARGH! KNOWING YOUR PLACE VALUE MULTIPLICATION AND DIVISION IS TOUGH! NO MATTER HOW MANY TIMES I TRY, CATWOMAN ALWAYS MANAGES TO DEFEAT ME... IF I GIVE YOU SOME TIPS AND YOUR TEACHER HELPS YOU TO UNDERSTAND, MAYBE WE CAN FINALLY PREVAIL!

#### HOW TO MULTIPLY DECIMALS

- 1. Multiply normally, ignoring the decimal points.
- 2. **Then** put the decimal point in the answer it will have as many decimal places as the two original numbers combined.

Example : Multiply 0.03 by 1.1

start with :	0.03 × 1.1
multiply without decimal points :	3 ×    = 33
0.03 has <b>2 decimal places,</b>	
and 1.1 has I decimal place,	
so the answer has 3 decimal place	e <b>s:</b> 0.033

#### **DIVIDING A DECIMAL NUMBER BY A WHOLE NUMBER**

- I. Use Division or Long Division (ignoring the decimal point)
- 2. Then put the decimal point in the same spot as the dividend (the number being divided)

#### Example: Divide 9.1 by 7



#### **DIVIDING BY DECIMAL NUMBER**

- 1. Change the number we are dividing by to a whole number first, by **shifting the decimal point of both numbers** to the right:
- 2. It is safe to do this if we remember to shift the decimal point of both numbers the same number of places.

Example: divide 6.4 by 0.4	6.4/0.4 is exactly the same as 64/4, as we <b>moved the decimal point</b> of both numbers. Now we can calculate:					
Move I	64/4 = 16 So the answer is: 64/04 = 16					
6.4 64	Are there really 16 lots of 0.4 in 6.4? Let's see:					
0.4	0 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6 4.0 4.4 4.8 5.2 5.6 6.0 6.4					





# One minute brain training. 👸



	Column A		Column B		Colur	nn C	
4	×10 =	4	×100 =	4	×1000	=	6
9	×10 =	8	×100 =	1	×1000	=	10
7	×10 =	6	×100 =	7	×1000	=	17
2	×10 =	9	×100 =	8	×1000	=	29
6	×10 =	7	×100 =	6	×1000	=	2
8	×10 =	5	×100 =	9	×1000	=	28
1	×10 =	3	×100 =	5	×1000	=	9
12	×10 =	15	×100 =	13	×1000	=	19
24	×10 =	27	×100 =	36	×1000	=	93
56	×10 =	63	×100 =	71	×1000	=	70
73	×10 =	92	×100 =	90	×1000	=	712
82	×10 =	11	×100 =	16	×1000	=	201
132	×10 =	121	×100 =	144	×1000	=	333
27	×10 =	17	×100 =	150	×1000	=	76
49	×10 =	32	×100 =	83	×1000	=	46
379	×10 =	124	×100 =	241	×1000	=	87
33	×10 =	45	×100 =	78	×1000	=	45
732	×10 =	320	×100 =	57	×1000	=	473
444	×10 =	560	×100 =	820	×1000	=	74
80	×10 =	75	×100 =	62	×1000	=	165

#### Column D

6	×100	=	76	×1000	=
10	×1000	=	46	×10	=
17	×10	=	87	×100	=
29	×100	=	45	×1000	=
2	×1000	=	473	×10	=
28	×10	=	74	×100	=
9	×100	=	165	×1000	=
19	×1000	=			
93	x10	=			
70	×100	=			
712	×1000	=			
201	×10	=			
333	×100	=			



### Multiplying by 10, 100 and 1,000

Complete the table to show how you're using **multiplication to convert the following measurements** (the first one has been done for you):

Original measurement	Convert to	Multiply by	Answer
2 metres	centimetres	100	200 cm
15 kilograms	grams		
75 centimetres	millimetres		
4 litres	millilitres		
3.5 metres	centimetres		
12.5 kilometres	metres		
8.5 litres	millilitres		
1.5 kilograms	grams		
0.4 metres	centimetres		
2.5 centimetres	millimetres		
2 metres	millimetres		
0.75 kilograms	grams		
3 tonnes	kilograms		

Now check your answers - as well as checking the answer column, check that you've multiplied by the correct number.



Dividing by Multiples of Negative Powers of Ten (A)

Single-Digit Facts

14	÷	7	=	16	÷	2	=
14	÷	0.7	=	16	÷	0.2	=
14	÷	0.07	=	16	÷	0.02	=
14	÷	0.007	=	16	÷	0.002	=
14	÷	0.0007	=	16	÷	0.0002	=
18	÷	6	=	63	÷	9	=
18	÷	0.6	=	63	÷	0.9	=
18	÷	0.06	=	63	÷	0.09	=
18	÷	0.006	=	63	÷	0.009	=
18	÷	0.0006	=	63	÷	0.0009	=
9	÷	1	=	12	÷	3	=
9	÷	0.1	=	12	÷	0.3	=
9	÷	0.01	=	12	÷	0.03	=
9	÷	0.001	=	12	÷	0.003	=
9	÷	0.0001	=	12	÷	0.0003	=
42	÷	7	=	35	÷	7	=
42	÷	0.7	=	35	÷	0.7	=
42	÷	0.07	=	35	÷	0.07	=
42	÷	0.007	=	35	÷	0.007	=
42	÷	0.0007	=	35	÷	0.0007	=
2	÷	2	=	936	÷	8	=
2	÷	0.2	=	936	÷	0.8	=
2	÷	0.02	=	936	÷	0.08	=
2	÷	0.002	=	936	÷	0.008	=
2	÷	0.0002	=	936	÷	0.0008	=
					Ch	allenge	



Dividing by Multiples of Positive Powers of Ten (B)

Single-Digit Facts

8	÷	2	=	6	÷	2	=
8	÷	20	=	6	÷	20	=
8	÷	200	=	6	÷	200	=
8	÷	2,000	=	6	÷	2,000	=
8	÷	20,000	=	6	÷	20,000	=
48	÷	6	=	8	÷	4	=
48	÷	60	=	8	÷	40	=
48	÷	600	=	8	÷	400	=
48	÷	6,000	=	8	÷	4,000	=
48	÷	60,000	=	8	÷	40,000	=
18	÷	3	=	10	÷	2	=
18	÷	30	=	10	÷	20	=
18	÷	300	=	10	÷	200	=
18	÷	3,000	=	10	÷	2,000	=
18	÷	30,000	=	10	÷	20,000	=
8	÷	8	=	18	÷	2	=
8	÷	80	=	18	÷	20	=
8	÷	800	=	18	÷	200	=
8	÷	8,000	=	18	÷	2,000	=
8	÷	80,000	=	18	÷	20,000	=
63	÷	9	=	156	÷	2	=
63	÷	90	=	156	÷	20	=
63	÷	900	=	156	÷	200	=
63	÷	9,000	=	156	÷	2,000	=
63	÷	90,000	=	156	÷	20,000	=
					Ch	allenge	



### Dividing by Multiples of Powers of Ten (A)

· · · · · · · · · · · · · · · · · · ·	=
1,400 ÷ 20	=
14,000 ÷ 200	=
140,000 ÷ 2,000	=
16 ÷ 2	=
160 ÷ 20	=
1,600 ÷ 200	=
16,000 ÷ 2,000	=
60 ÷ 3	=
600 ÷ 30	=
6,000 ÷ 300	=
60,000 ÷ 3,000	=
1 200 ± 2	_
1,000 ÷ 3	_
18,000 ÷ 30	=
18,000 ÷ 30 180,000 ÷ 300	=
18,000 ÷ 30 180,000 ÷ 300 180,000 ÷ 300 1,800,000 ÷ 3,000	= = =
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$	= = =
$18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$	= = =
$18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$	- - - -
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$ $8,800,000 \div 1,100$	- - - - -
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$ $8,800,000 \div 1,100$ $88,000,000 \div 11,000$	
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$ $8,800,000 \div 1,100$ $88,000,000 \div 11,000$	
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$ $8,800,000 \div 1,100$ $88,000,000 \div 11,000$ $45 \div 5$	
$1,000 \div 3$ $18,000 \div 30$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 11$ $880,000 \div 110$ $8,800,000 \div 1,100$ $88,000,000 \div 11,000$ $45 \div 5$ $450 \div 50$	
$1,000 \div 3$ $18,000 \div 300$ $180,000 \div 300$ $1,800,000 \div 3,000$ $88,000 \div 110$ $880,000 \div 110$ $8,800,000 \div 1,100$ $88,000,000 \div 11,000$ $45 \div 5$ $450 \div 50$ $4,500 \div 500$	

88 ÷	8	=
880 ÷	80	=
8.800 ÷	800	=
88.000 ÷	8.000	=
00,000	0,000	
10,800 ÷	9	=
108,000 ÷	90	=
1,080,000 ÷	900	=
10.800.000 ÷	9.000	=
, ,	,	
132 ÷	11	=
1,320 ÷	110	=
13,200 ÷	1,100	=
132,000 ÷	11.000	=
,	,	
132 ÷	12	=
132 ÷ 1,320 ÷	12 120	=
132 ÷ 1,320 ÷ 13,200 ÷	12 120 1,200	= = =
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷	12 120 1,200 12,000	= = =
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷	12 120 1,200 12,000	= = =
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷	12 120 1,200 12,000 8	= = =
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 8,000 ÷	12 120 1,200 12,000 8 80	
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 80,000 ÷ 800,000 ÷	12 120 1,200 12,000 8 80 800	
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 80,000 ÷ 800,000 ÷ 8,000,000 ÷	12 120 1,200 12,000 8 80 800 8,000	
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 80,000 ÷ 800,000 ÷ 8,000,000 ÷	12 120 1,200 12,000 8 80 800 8,000	
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 8,000 ÷ 800,000 ÷ 8,000,000 ÷ 1,600 ÷	12 120 1,200 12,000 8 800 800 8,000 4	
132 ÷ 1,320 ÷ 13,200 ÷ 132,000 ÷ 80,000 ÷ 800,000 ÷ 8,000,000 ÷ 1,600 ÷ 16,000 ÷	12 120 1,200 12,000 8 800 800 8,000 4 40	
$\begin{array}{r} 132 \div \\ 1,320 \div \\ 13,200 \div \\ 132,000 \div \\ 8,000 \div \\ 80,000 \div \\ 800,000 \div \\ 8,000,000 \div \\ 1,600 \div \\ 16,000 \div \\ 160,000 \div \end{array}$	12 120 1,200 12,000 8 800 800 8,000 4 40 400	



Multiplying by Multiples of Negative Powers of Ten (D)

Single-Digit Facts

7	Х	9	=	9	Х	3	=
7	Х	0.9	=	9	Х	0.3	=
7	Х	0.09	=	9	Х	0.03	=
7	Х	0.009	=	9	Х	0.003	=
7	Х	0.0009	=	9	Х	0.0003	=
6	Х	6	=	2	Х	7	=
6	Х	0.6	=	2	Х	0.7	=
6	Х	0.06	=	2	Х	0.07	=
6	Х	0.006	=	2	Х	0.007	=
6	Х	0.0006	=	2	Х	0.0007	=
1	Х	7	=	4	Х	8	=
1	Х	0.7	=	4	Х	0.8	=
1	Х	0.07	=	4	Х	0.08	=
1	Х	0.007	=	4	Х	0.008	=
1	Х	0.0007	=	4	Х	8000.0	=
3	Х	2	=	8	Х	4	=
3	Х	0.2	=	8	Х	0.4	=
3	Х	0.02	=	8	Х	0.04	=
3	Х	0.002	=	8	Х	0.004	=
3	Х	0.0002	=	8	Х	0.0004	=
5	Х	3	=	13	Х	3	=
5	Х	0.3	=	13	Х	0.3	=
5	Х	0.03	=	13	Х	0.03	=
5	Х	0.003	=	13	Х	0.003	=
5	Х	0.0003	=	13	Х	0.0003	=
					Ch	allenge	



Multiplying by Multiples of Negative Powers of Ten (A)

30 x 3 = 300 x 0.3 = = 3,000 x 0.03 30,000 x 0.003 = 3,000 x 6 = 30,000 x 0.6 = = 300,000 x 0.06 3,000,000 x 0.006 = 8,000 x 2 = 80,000 x 0.2 = 800,000 x 0.02 = 8,000,000 x 0.002 = 700 x 12 = = 7,000 x 1.2 70,000 x 0.12 = 700,000 x 0.012 = 600 x 4 = = 6,000 x 0.4 60,000 x 0.04 = 600,000 x 0.004 = 3,000 x 10 = 30,000 x 1 = = 300,000 x 0.1 3,000,000 x 0.01 =

1,000 x 12 10,000 x 1.2 = 100,000 x 0.12 = 1,000,000 x 0.012 = 500 x 2 = 5,000 x 0.2 = 50,000 x 0.02 500,000 x 0.002 = 80 x 6 = 800 x 0.6 = 8,000 x 0.06 = 80,000 x 0.006 = 50 x 11 = = 500 x 1.1 5,000 x 0.11 = 50,000 x 0.011 = 800 x 9 = ) = 8,000 x 0.9 80,000 x 0.09 = 800,000 x 0.009 = 800 x 2 = 8,000 x 0.2 = 80,000 x 0.02 = 800,000 x 0.002 =



Multiplying by Multiples of Negative Powers of Ten (E)

70 x	12	=
700 x	1.2	=
7,000 x	0.12	=
70,000 x	0.012	=
20 x	6	=
200 x	0.6	=
2,000 x	0.06	=
20,000 x	0.006	=
9 x	6	=
90 x	0.6	=
900 x	0.06	=
9,000 x	0.006	=
300 x	2	=
300 x 3,000 x	2 0.2	=
300 x 3,000 x 30,000 x	2 0.2 0.02	= = =
300 x 3,000 x 30,000 x 300,000 x	2 0.2 0.02 0.002	= = =
300 x 3,000 x 30,000 x 300,000 x	2 0.2 0.02 0.002	= = =
300 x 3,000 x 30,000 x 300,000 x 50 x	2 0.2 0.02 0.002 3	= = =
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x	2 0.2 0.02 0.002 3 0.3	= = = =
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x	2 0.2 0.02 0.002 3 0.3 0.03	= = = = =
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003	= = = = =
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003	
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003 11	
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x 4 x 40 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003 11 1.1	
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x 4 x 40 x 400 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003 11 1.1 0.11	
300 x 3,000 x 30,000 x 300,000 x 50 x 500 x 5,000 x 50,000 x 4 x 40 x 400 x 4,000 x	2 0.2 0.02 0.002 3 0.3 0.03 0.003 11 1.1 0.11 0.011	

500 x	4	=
5,000 x	0.4	=
50,000 x	0.04	=
500,000 x	0.004	=
6,000 x	10	=
60,000 x	1	=
600,000 x	0.1	=
6,000,000 x	0.01	=
7,000 x	12	=
70,000 x	1.2	=
700,000 x	0.12	=
7,000,000 x	0.012	=
9,000 x	11	=
90,000 x	1.1	=
900,000 x	0.11	=
9,000,000 x	0.011	=
11,000 x	2	=
110,000 x	0.2	=
1,100,000 x	0.02	=
11,000,000 x	0.002	=
70 x	11	=
700 x	1.1	=
7,000 x	0.11	=
70 000 x	0.011	=

Jf yon think yon have trained hard enough to overcome the terrifying Catwoman then speak to your teacher... this one may be tricky...



Jf you win, then stick your certificate here and reflect on any areas you are strong at or may need to work on before you move forward.



# **TRAIN TO BEAT IRONMAN**

IRONMAN IS GOING TO TEST YOUR POWERS OF MENTAL MULTIPLICATION; YOU NEED TO BE ABLE TO MULTIPLY 2 DIGIT NUMBERS BY SINGLE DIGIT NUMBERS... IN YOUR HEAD! DO NOT WORRY THOUGH-THERE IS A SIMPLE WAY OF DOING THIS THAT I KNOW YOU CAN DO WITH A LITTLE BIT OF PRACTISE. MAYBE YOU CAN HELP ME TO FINALLY DEFEAT HIM!

#### TRAINING TIPS AND TRICKS

Remember, we can multiply a two digit number by a single digit number by breaking it down into three steps:

- I. separating the two digit number into tens and units
- 2. multiplying both of these by the single digit number
- 3. adding the two results together:

Example multiplication:	mple multiplication: Example multiplication:				
26 X 5 =	2 x 14 =				
20 x 5 = Separate 26 into te 6 x 5 = and multiply each b digit number, 5	ens and units, 10 x 2 = by the single 4 x 2 =	Separate 14 into tens and units, and multiply each by the single digit number, 2			
20 x 5 = 100 Multiply the tens	10 x 2 = 2	20 Multiply the tens			
6 x 5 = 30 Multiply the units	4 x 2 = 8	Multiply the units			
100 + 30 = Add together the r 130	results 20 + 8 = 28	Add together the results			
So 26 x 5 = 130 26 x 5 = 5 = 130 2 x 5 = 130	n use the b" here: $2 \times 14 = 2$	28 Psst you can use the "magic zero" here: I x 2 = 2			
20 × 5 =	100 ×	10 × 2 = 20			



### Multiplying 1 and 5 by Teen Numbers

Example	17 x 5	Example	2 x 14
Partition the 2-digit number:	17 = 10 and 7	Partition the 2-digit number:	14 = 10 and 4
Multiply each part by 5:	10 x 5 = 50 7 x 5 = 35	Multiply each part by 5:	10 x 2 = 20 4 x 2 = 8
Add the two parts back together:	50 + 35 = <b>85</b>	Add the two parts back together:	20 + 8 = <b>28</b>

• Complete the following using the above method





### **Multiplication using Partitioning**

Please set out your work like this: the next step is to do it mentally and this will help you.

25 x 3	=	Т	U	
		2	5	
	Х		3	_
		6	0	(20 x 3)
	+	1	5	(5x3)
		7	5	-



#### Section A ( 2 digits x 1 digit, 2s, 3s, 4s and 5s )

1) 12 x 5	6) 73 x 2	11) 23 x 5
2) 61 x 2	7) 16 x 3	12) 47 x 3
3) 44 x 3	8) 94 x 4	13) 82 x 2
4) 18 x 4	9) 25 x 2	14) 13 x 5
5) 29 x 5	10) 52 x 5	15) 54 x 4

#### Section B ( 2 digits x 1 digit, 6s, 7s, 8s and 9s )

1) 62 x 7	6) 72 x 6	11) 49 x 7
2) 28 × 9	7) 21 x 7	12) 17 x 6
3) 31 x 6	8) 85 × 9	13) 77 x 8
4) 14 × 8	9) 27 x 8	14) 58 x 9
5) 39 x 9	10) 34 x 8	15) 22 x 7



Multiplying two digit numbers by single digit numbers (HT numbers x T numbers)

Remember, we can multiply a two digit number by a single digit number by separating the two digit number into tens and units, and multiplying both of these by the single digit number, then adding the two results together:  $16 \times 5 \longrightarrow$  separate 16 into tens and units, and multiply each by the single digit number, 5  $(10 \times 5) + (6 \times 5) \longrightarrow$  work each of these out  $(50) + (30) \longrightarrow$  and add them together!  $16 \times 5 = 80$ 

Work out the following multiplications:

17 x 5	14 × 4
12 × 9	14 x 5
15 x 3	13 × 9
12 x 5	13 x 5
19 x 3	19 x 5
Five people have thirteen apples each. Ho	w many apples are there altogether?
A school has seven classrooms. There are children are there in the whole school?	twelve children in each one. How many

# TRAIN TO BEAT

MULTIPLICATION 2 digits × 1 digit





#### Multiplying 10s by 1 digit number: 30 × 5 = 30 × 2 60 × 3 = = 20 × 8 20 × 3 = 40 × 9 = = 50 × 7 = 10 × 2 = 60 × 8 = 20 × 4 = 80 × 2 = 40 × 5 = Multiplication to 100: × 6 = 2 6 4 = 6 × × 4 = × 10 = 8 2 × 3 5 × 8 = = 8 × 5 9 × 4 = 8 × 3 = = 3 × 8 = 5 × 10 = 6 × 9 =

#### Adding partial products:

32	4	8	6
+360	+80	+40	+210
12	6	48	24
+160	+240	+320	+90



### Multiplication

1) 36	2) 49	3) 78	4) 56
× 9	× 8	× 4	× 5
5) 77	6) 14	7) 65	8) 97
× 9	× 6	× 8	× 7
9) 30	10) 12	11) 69	12) 96
× 5	× 3	× 8	× 2
13) 22	14) 73	15) 91	16) 86
× 4	× 9	× 6	× 3
17) 58	18) 63	19) 32	20) 49
× 3	× 2	× 9	× 4



Multiplication Problems Write the sum and find the answer.



1) There are 42 crayons in a pot. How many crayons in 5 pots?

.....

2) There are 72 wings on one bird. How many wings on 9 birds?



(3) One dog has 74 legs. How many legs on 3 dogs?

4) One banana costs 10p. How much do twenty-three bananas cost?

.....

5) There are 5 points on one star. How many points on 58 stars?

6) There are six people in the running team. How many people in 29 teams?





8) There are 4 leaves on each plant. How many leaves on 73 plants?


TRAIN TO BEAT

### Multiplication

1) 23	2) 89	3) 65	4) 47
× 6	× 4	× 3	× 8
5) 97	6) 46	7) 72	8) 37
× 2	× 5	× 7	× 0
9) 51	10) 34	11) 67	12) 15
× 8	× 3	× 4	× 5
13) 83	14) 95	15) 17	16) 50
× 6	× 1	× 3	× 9
17) 26	18) 73	19) 64	20) 19
× 7	× 8	× 5	× 4

Jf yon think yon have trained hard enough to overcome Jronman then have a chat with your teacher. Only two more to go now!



Jf you win, then stick your certificate here and reflect on any areas you are strong at or may need to work on before you move onto the last hero!



# TRAIN TO BEAT WONDER WOMAN

YOU ARE SO CLOSE TO BECOMING A MASTER OF MATHS- THERE IS ONLY WONDER WOMAN LEFT TO BEAT! USE THESE TIPS AND, WITH SOME HARD WORK, YOU WILL BE ABLE TO OVERCOME HER!

#### FINDING FRACTIONS OF AMOUNTS

When thinking about fractions, decimals and percentages we need to remember that they all show how many parts of a whole we have. To find the fraction of an amount you need to:

- I. Divide by the denominator
- 2. Multiply by the numerator

To explain why this works, take this example: Myra has 21 sweets and gives 4/7 to a friend. How many does she give away?



(divide by the denominator)  $21 \div 7 = 3$  so 1/7 = 3

(multiply by the numerator  $3 \times 4 = 12$  so 4/7 = 12



#### FINDING THE WHOLE FROM A FRACTION

Again, the key thing here is to remember that fractions, decimals and percentages all mean parts of a whole. If we know what the part of the whole is, we can use this to work out the complete whole by:

- I. Find what I/n is: (divide by the numerator)
- 2. Find n/n (multiply by the denominator)

Consider this example: Adri has won 2/3 of his races so far. If he has won 36 in total, what is the maximum he could have won? Take a look at the fraction strips to the right to see how this problem can be approached.





2. Now let's find out the whole (3/3) $3/3 = 18 \times 3 = 54$ 

#### FUN FACT!

Remember your work on order of operations? You should know that division and multiplication are as important as each other so they happen at the same time. With fractions of amounts, this means that you can do either operation first and get the same result! Let's look at the two examples we have already seen:

**1. Option 1:21**  $\div$  7 = 3, 3  $\times$  4 = 12 or the opposite: 21  $\times$  4 = 84, 84  $\div$  7 = 12 **2.** Option 1: 36  $\div$  2 = 18, 18  $\times$  3 = 54 or the opposite: 36  $\times$  3 = 108, 108  $\div$  2 = 54

As long as we only change the order of operations, the answer stays the same; pretty cool eh?!

## TRAIN TO BEAT WONDER WOMAN!

									1 W - 1(	/hole 1.0 )0%	)								
				1/ <u>;</u> 0.5	2 5 %										<sup>1/2</sup> 0.5 50%	,			
		<sup>1/</sup> 0.3 33.3	/ <sub>3</sub> 33 3%				<sup>1/</sup> 3 0.333 33.3%			1/ <sub>3</sub> 0.333 33.3%									
	1 0. 25	/₄ .25 5%				·	1/4 0.2 25%	5				1/4 0.2 25%	1 5 %				1 0. 25	/4 25 5%	
2	1/ <sub>5</sub> 0.2 20%	Ď			1/ 0. 20	5 2 %			( 2	1/ <sub>5</sub> ).2 0%				1/ <sub>5</sub> 0.2 20%				1/5 0.2 209	<u>&gt;</u> %
1/ 0.1 16.	′ <sub>6</sub> 67 7%			1/ 0.1 16.7	6 67 7%		-	<sup>1</sup> /e 0.16 16.7	67 7%		1/ 0.1 16.7	6 67 7%		(	<sup>1/6</sup> 0.167 6.7%	7 %		0. 16	/ <sub>6</sub> 167 .7%
<sup>1/7</sup> 0.14 14.3	3 %		1/ 0.1 14.3	7 43 3%		0 14	<sup>1/7</sup> .143 4.3%	)	0. 14	1/ <sub>7</sub> 143 .3%		0. <sup>-</sup> 14	1/ <sub>7</sub> 143 .3%	}	0. 14	<sup>1/</sup> 7 .143 1.3%		0 1	1/ <sub>7</sub> .143 4.3%
<sup>1/8</sup> 0.125 12.5%	5 6	0	<sup>1/</sup> 8 .125 2.5%	,	1 0. 12	1/ <sub>8</sub> 125 .5%	5	0. 12	1/ <sub>8</sub> 125 2.5%	0. 12	<sup>1/8</sup> .125 2.5%	,	0. 12	<sup>1/</sup> 8 .125 2.5%		1/ 0.1 12.	8 25 5%	1	<sup>1/</sup> 8 0.125 12.5%
<sup>1/9</sup> 0.111 11.1%	,	1/ 0.1 11.1	′9 11 1%	0	<sup>1/</sup> 9 ).111 1.1%	, o	1/ 0.1 11.	′9 11 1%	0. 11	/ <sub>9</sub> 111 .1%	0	<sup>1/9</sup> ).111 1.1%	, o	1/( 0.1 11.1	) 11  %	0 1 <sup>.</sup>	<sup>1/</sup> 9 .111 1.1%		<sup>1/9</sup> 0.111 11.1%
<sup>1/<sub>10</sub> 0.1 10%</sup>		<sup>1/<sub>10</sub> 0.1 10%</sup>	, D	<sup>1</sup> / <sub>1</sub> 0. 10	10 1 %	1	<sup>1</sup> / <sub>10</sub> 0.1 0%		<sup>1</sup> / <sub>10</sub> 0.1 10%	1, 0 1(	/ <sub>10</sub> ). <b>1</b> )%		<sup>1</sup> / <sub>10</sub> 0.1 0%	5	<sup>1/<sub>10</sub> 0.1 10%</sup>		<sup>1/<sub>10</sub> 0.1 10%</sup>	,	<sup>1/<sub>10</sub> 0.1 10%</sup>
<sup>1/<sub>11</sub> 0.091 9.1%</sup>	09	<sup>1/<sub>11</sub> .091 ).1%</sup>	0. 9,	/ <sub>11</sub> 091 .1%	09	<sup>1/</sup> 11 .09 <sup>.</sup> .1%	1 C	<sup>1/</sup> 11 ).09 9.1%	1 0. 6 9.	/ <sub>11</sub> 091 .1%	1/ 0.0 9.1	/ <sub>11</sub> )91 1%	0. 9.	1/ <sub>11</sub> .091 .1%	1/ 0.0 9.1	/11 )91  %	<sup>1</sup> / <sub>1</sub> 0.09 9.1	1 91 %	<sup>1/</sup> 11 0.091 9.1%
<sup>1</sup> / <sub>12</sub> 0.083 8.3%	1/ 0.0 8.3	/ <sub>12</sub> 083 3%	<sup>1</sup> / <sub>1</sub> 0.08 8.3	2 83 %	1/ <sub>12</sub> 0.08 8.39	2 83 %	<sup>1/</sup> 12 0.08 8.39	2 33 %	<sup>1/<sub>12</sub> 0.083 8.3%</sup>	1/- 0.0 8.3	12 83 %	<sup>1</sup> / <sub>1</sub> 0.08 8.3	2 33 %	<sup>1/</sup> 12 <b>0.08</b> 8.3%	3 0	<sup>1/<sub>12</sub> ).083 3.3%</sup>	3 0.0 5 8.3	/ <sub>12</sub> )83 3%	<sup>1/<sub>12</sub> 0.083 8.3%</sup>

Fractions, decimals and percentages are different ways of presenting the same information; they all mean "parts of a whole". Use these fraction strips to help you convert between them.



### Finding Fractions of Numbers and Shapes.

To find a fraction of a number you divide by the bottom number and multiply by the top number. This is because the denominator tells us how much to break the whole into and the numerator tells us how much of the whole we are talking about.



Use this method to help you answer these questions.

- 1. ⅓ of 30 = \_\_\_\_
- 2. ¼ of 16 = \_\_\_\_

- 5. ¾ of 32 = \_\_\_\_
- 6. ⅔ of 27 = \_\_\_\_ 7. ⅔ of 25 = \_\_\_\_ 8. ¾ of 40 = \_\_\_\_ 9. ¾ of 36 = \_\_\_\_ 10.% of 36 = \_\_\_\_
- 11.⅔ of 48 = \_\_\_\_ 12. ⅔ of 36 = \_\_\_\_ 13. ¾ of 48 = \_\_\_\_ 14. ⅔ of 45 = \_\_\_\_ 15. ¾ of 72 =

Now shade the correct amount of these shapes.



## TRAIN TO BEAT WONDER WOMAN!



# TRAIN TO BEAT WONDER WOMAN!

What amount is shaded? Write your answer as a fraction, decimal and percentage.





# Comparing Fractions and Decimals

Compare the following fractions and decimals by using >, < or =



# Fractions of Numbers

Find the fractional value of each of the numbers below.

(1)	What is $\frac{1}{3}$ of 36?	 (14)	What is $\frac{1}{3}$ of 45?	
(2)	What is $\frac{1}{6}$ of 54?	 (15)	What is $\frac{2}{5}$ of 50?	
(3)	What is $\frac{4}{5}$ of 35?	 (16)	What is $\frac{1}{3}$ of 84?	
(4)	What is $\frac{1}{5}$ of 140?	 (17)	What is $\frac{1}{2}$ of 60?	
(5)	What is $\frac{9}{25}$ of 100?	 (18)	What is $\frac{7}{10}$ of 40?	
(6)	What is $\frac{8}{15}$ of 135?	 (19)	What is $\frac{1}{3}$ of 72?	
(7)	What is $\frac{1}{2}$ of 42?	 (20)	What is $\frac{13}{15}$ of 105?	
(8)	What is $\frac{3}{20}$ of 60?	 (21)	What is $\frac{31}{45}$ of 90?	
(9)	What is $\frac{1}{2}$ of 70?	 (22)	What is $\frac{2}{3}$ of 30?	
(10)	What is $\frac{1}{7}$ of 63?	 (23)	What is $\frac{1}{2}$ of 48?	
(11)	What is $\frac{1}{2}$ of 30?	 (24)	What is $\frac{1}{2}$ of 36?	
(12)	What is $\frac{1}{2}$ of 56?	 (25)	What is $\frac{3}{25}$ of 75?	
(13)	What is $\frac{1}{2}$ of 48?	(26)	What is $\frac{1}{2}$ of 48?	



### Find the Whole from Part

1. Find the whole when part is know. Note closely the type of reasoning.

<ul> <li>a. 4/5 of John's salary is \$800.</li> <li>1/5 of his salary is \$</li> <li>His salary is \$</li> </ul>	<ul> <li>b. 3/8 of the books in a store is 630 books.</li> <li>1/8 of the books is</li> <li>In total, there are books.</li> </ul>
<ul> <li>c. 30% of a shirt's price is \$4.20.</li> <li>10% of the price is</li> <li>The whole price is</li> </ul>	<ul> <li>d. 17% of the people is 221 people.</li> <li>1% of the people is people.</li> <li>There are people in all.</li> </ul>

2. Find the whole when a part is known. First, find a smaller part, such as 10% or 1%, then use that value to find the whole.

a. 2/3 of a number is 48	b. 3/5 of a number is 99	c. 5/8 of a number is 75
d. 40% of a price is &16	e. 90% of a salary is \$1080	f. 70% of the people is 161 people
g. 8% of a price is \$2.40	h. 45% of the people is 720 people	i. 19% of the water was 1167 L

3. Now  $_{\pounds}$  represents the WHOLE amount, and it is divided into various parts. Solve for  $_{\pounds}$ 

\$255 1/3 of all	\$34 5/6 of all
а.	b.
\$100 \$125 1/4 of all	18kg 2/5 of all
С.	d.
2kg 8kg 60%	23kg 48.5kg 35%
e.	f.





Use your knowledge and understanding to solve these percentage problems. Don't forget to show how you worked them out and check the units carefully!

1. 45% of \_\_\_\_ = 36m11. 45% of \_\_\_\_ = 81mm 2. 35% of \_\_\_\_ = 7cm 12. 48% of \_\_\_\_ = 48ml13. 11% of = £13.31 3. 62% of = 124ml 4. 24% of \_\_\_\_ = £21.60 14. 60% of \_\_\_\_ = 30 inches 5. 12% of \_\_\_\_ = 4.321 15. 39% of \_\_\_\_\_ = £29.25 6. 15% of \_\_\_\_\_ = £2.25 16. 20% of = 12kg 7. 20% of \_\_\_\_ = 12mm 17. 42% of \_\_\_\_ = 63g 18. 18% of = 25.2018. 30% of \_\_\_\_ = 12km 19. 27% of \_\_\_\_ = 51.301 9. 85% of \_\_\_\_ =  $\pounds$ 72.25 10. 55% of \_\_\_\_ =  $\pounds 44.55$ 20. 31% of \_\_\_\_ = £68.20



### Percentage Increase & Decrease

Fill in the gaps...

### Percentage Increase

	Original Amount	% Increase	New Amount
1)	56	25%	
2)	6	50%	
3)	5	20%	
4)	8	75%	14
5)	10	90%	
6)	30	70%	
7)	50	2%	
8)	21	100%	

	Original Amount	% Increase	New Amount
9)	32		56
10)	24	25%	30
11)	15		18
12)	30		33
13)	150		153
14)	120		126
15)	200		202
16)	20		50

#### Percentage Decrease

	Original Amount	% Decrease	New Amount
1)	50	30%	
2)	18	50%	
3)	25	4%	
4)	60	35%	
5)	40	15%	
6)	64	75%	16
7)	40	45%	
8)	45	60%	

Original Amount	% Decrease	New Amount
20		19
14		7
90	10%	81
35		21
400		4
50		47
125		115
150		132
	Original Amount 20 14 90 35 400 50 125 150	Original Amount         % Decrease           20         1           14         -           90         10%           35         -           400         -           50         -           125         -           150         -

You have finally reached the powerful Wonder Woman; speak to your teacher when you are ready to become a maths superhero!



Remember; just because you are a maths superhero it does not mean that the training can stop... write what your next target is below. Also, what sort of training will you do to make sure you achieve it?



## **NOTES :**

## **NOTES :**

# The path to becoming a

# <u>Superkero</u>

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WONDER	Fractions, decimals and
WOMAN	percentages of quantitie
IRONMAN	
CATWOMAN	All with place value- THU and tenths (By the end of year 5)
SUPERMAN	All with division
	QY 11Y 12Y
BLACK WIDOW	97, 117, 127
THOR	6X, 7X, 8X
HAWK-GIRL	3X, 4X
BATMAN	2x, 5x, 10x

The road will be long and each hero will do their best to make yon falter. Do yon have what it takes to succeed? Train hard to beat the bosses and achieve greatness; good luck Maths warrior!