

[HOME](#)

# Numbers & the Number System

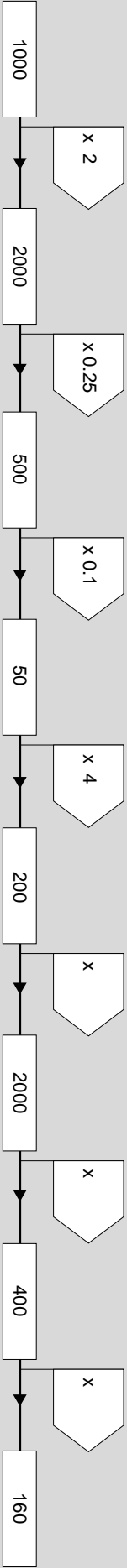
[Grid](#)[Index](#)[Print Group](#)

Numbers and the Number System Level 6	Title
Decimals	Decimal Flags
	Fraction to Decimal Match
Ordering and Rounding	Decimal Places Match
Percentages	Marks to Percentages
	Percentages Puzzle
Powers and Roots	Power Match
	Squares, Cubes and Roots

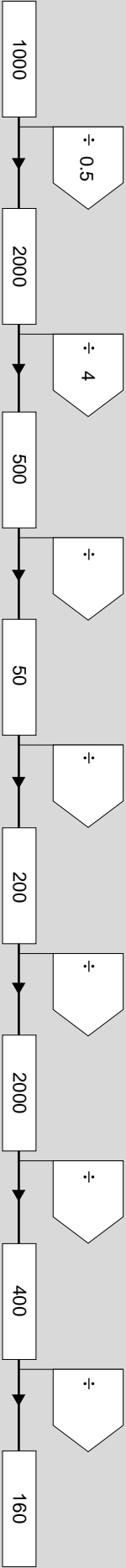
# Decimal Flags

- Complete the flags

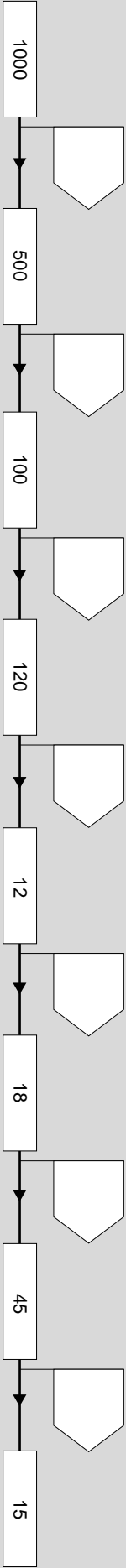
Using multiplication



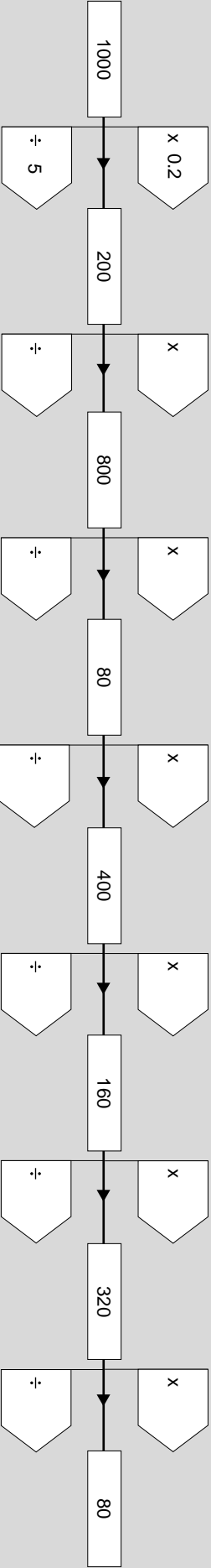
Using division



Using multiplication or division



Using multiplication

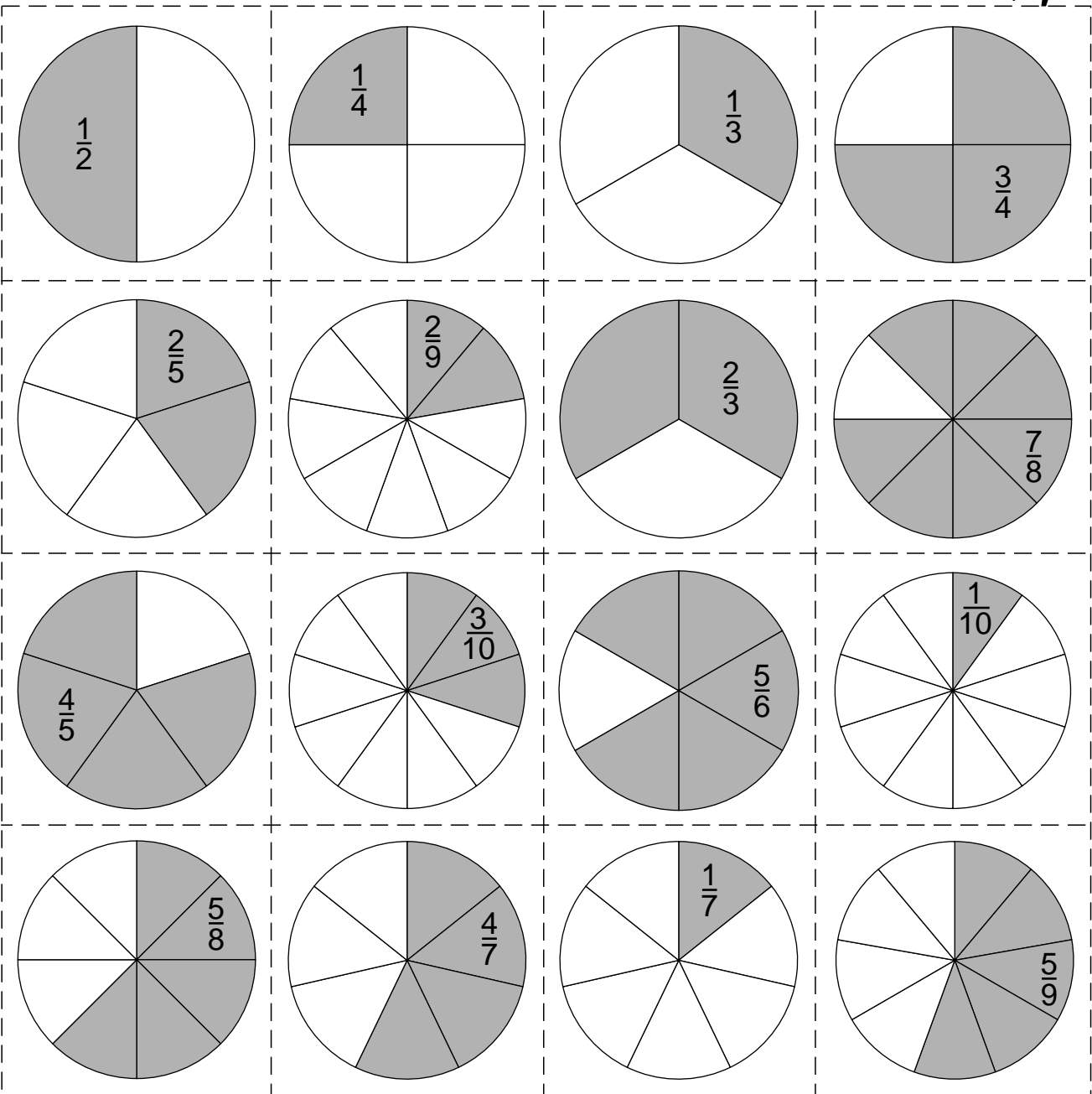


Using division

- What is the connection between the numbers used when multiplying and dividing?

# Fractions to Decimals Match

1. Match the fractions to the decimals.
2. Write down the fractions in order of size, smallest first.



0.5	0.3	0.1	0.57142857
0.4	0.625	0.25	0.66666666
0.33333333	0.14285714	0.22222222	0.75
0.8	0.55555555	0.875	0.83333333

# Decimal Places Match

The number on the calculator shows  
This can be approximated to:

4.4375312

4.4 to 1 dp  
(1 decimal place)

4.4375312



4.4

4.45

4.5

4.44 to 2 dp  
(2 decimal places)

4.4375312



4.43

4.435

4.44

4.438 to 3 dp  
(3 decimal places)

4.4375312



4.437

4.4375

4.438

Match each calculator answer to its three approximations.



Number on calculator <b>3.4457982</b>	Number to 2 decimal places 3.45 to 2 dp	Number to 1 decimal place 3.6 to 1 dp	Number to 3 decimal places 3.456 to 3 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.557 to 3 dp	Number on calculator <b>3.5471035</b>	Number to 2 decimal places 3.47 to 2 dp
Number to 2 decimal places 3.46 to 2 dp	Number on calculator <b>3.4561207</b>	Number to 3 decimal places 3.547 to 3 dp	Number to 1 decimal place 3.4 to 1 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.446 to 3 dp	Number on calculator <b>3.5568156</b>	Number to 2 decimal places 3.56 to 2 dp
Number to 1 decimal place 3.5 to 1 dp	Number to 3 decimal places 3.467 to 3 dp	Number to 2 decimal places 3.55 to 2 dp	Number on calculator <b>3.4672331</b>

# Marks to Percentages

Which is the best mark  
 $\frac{17}{20}$  or  $\frac{21}{25}$  or  $\frac{32}{40}$  ?

Converting the marks to percentages is one way to compare them.

$$\begin{array}{ccccccc} \frac{17}{20} & \xrightarrow{\times 2} & \frac{34}{40} & \xrightarrow{\times 3} & \frac{51}{60} & = & \frac{68}{80} = \frac{85}{100} = 85\% \\ & \xleftarrow{\times 2} & & \xleftarrow{\times 3} & & & \end{array}$$

$$\begin{array}{ccc} \frac{21}{25} & \xrightarrow{\times 4} & \frac{\square}{100} = \square\% \\ & \xleftarrow{\times 4} & \end{array}$$

$$\begin{array}{ccccccc} \frac{32}{40} & \xrightarrow{+4} & \frac{\square}{10} & \xrightarrow{\times \square} & \frac{\square}{100} & = & \square\% \\ & \xleftarrow{+4} & & \xleftarrow{\times \square} & & & \end{array}$$

So  $\frac{17}{20}$  is the best mark.

Use the two tables to answer the following questions.

1. In which term was Nazma's English mark better?

2. What did you notice about her marks for technology?

3. For which subject in the Autumn term did she get a better mark than in the Summer term?

4. In which subjects did she improve her marks from the Autumn term to the Summer term?

5. In which subject did she make the most improvement?

Here are Nazma's marks for the Autumn and Summer terms.  
Convert them to percentages.

Autumn Term

Subject	Mark	Working	%
Physical Education	$\frac{19}{25}$		
English	$\frac{34}{50}$		
French	$\frac{14}{20}$		
History	$\frac{17}{25}$		
Geography	$\frac{15}{30}$		
Mathematics	$\frac{41}{50}$		
Science	$\frac{21}{30}$		
Art	$\frac{28}{40}$		
Music	$\frac{12}{24}$		
Technology	$\frac{36}{40}$		

Summer Term

Subject	Mark	Working	%
Physical Education	$\frac{17}{20}$		
English	$\frac{32}{40}$		
French	$\frac{21}{25}$		
History	$\frac{8}{10}$		
Geography	$\frac{13}{20}$		
Mathematics	$\frac{36}{40}$		
Science	$\frac{14}{20}$		
Art	$\frac{17}{25}$		
Music	$\frac{11}{20}$		
Technology	$\frac{27}{30}$		

# Percentage Puzzle

You will need: scissors, glue

- Cut out the numbers at the bottom of this sheet.
- Place them on the sheet to make four true statements.
- Do not stick them down until you are sure that all four statements are true.

	% of	=



10	15	20	25	35	45
50	65	70	75	80	150

# Power Match

Cut out the 12 squares and match them in pairs.  
The number for all the blank boxes is the same.  
What is it?



$4^{\square}$	$3 \times \square$	$\underline{9}$
$32$	$\square^3$	$\underline{6}$
$10$	$\square \times 5$	$16$
$3^{\square}$	$8$	$\square^5$

# Power Match

Cut out the 12 squares and match them in pairs.  
The number for all the blank boxes is the same.  
What is it?



$4^{\square}$	$3 \times \square$	$\underline{9}$
$32$	$\square^3$	$\underline{6}$
$10$	$\square \times 5$	$16$
$3^{\square}$	$8$	$\square^5$



# Squares, Cubes and Roots

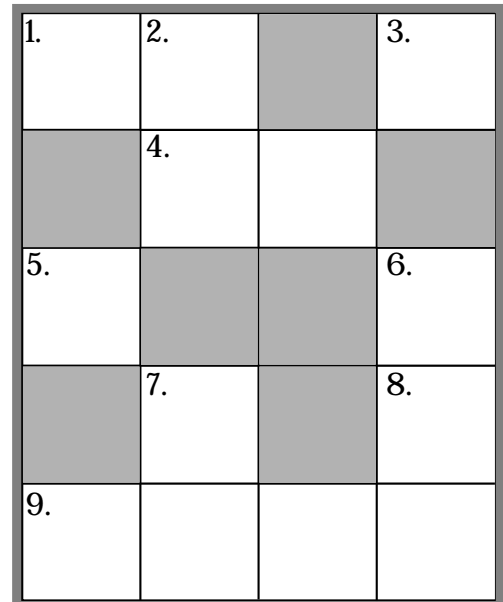
1. Solve this cross-puzzle.  
The information below may help.

## Across

1. square of 4
4. square of 7
5. square root of 25
8. cube root of 8
9. cube of 11

## Down

2. cube of 4
3. cube root of 27
6. square of 11
7. square root of 169



2. Invent a cross-puzzle using squares, cubes and roots of your own. Give it to someone else to solve.

## Information

$3 \times 3 = 9$	9 is the <u>square</u> of 3	3 is the <u>square root</u> of 9
$6 \times 6 = 36$	36 is the <u>square</u> of 6	6 is the <u>square root</u> of 36
$4 \times 4 \times 4 = 64$	64 is the <u>cube</u> of 4	4 is the <u>cube root</u> of 64
$5 \times 5 \times 5 = 125$	125 is the <u>cube</u> of 5	5 is the <u>cube root</u> of 125