

Stage 4

PROMPT sheet

4/1 Count in multiples

Now you must learn these multiples

| Multiples of 6 | Multiples of 7 | Multiples of 9 | Multiples of 25 |
|---------------------------|---------------------------|---------------------------|----------------------------|
| 6 | 7 | 9 | 25 |
| 12 | 14 | 18 | 50 |
| 18 | 21 | 27 | 75 |
| 24 | 28 | 36 | 100 |
| 30 | 35 | 45 | 125 |
| 36 | 42 | 54 | 150 |
| 42 | 49 | 63 | 175 |
| 48 | 56 | 72 | 200 |
| 54 | 63 | 81 | 225 |
| 60 | 70 | 90 | 250 |

| | | | |
|---|--------------------------------------|------------------|-----------------------|
| t h o u s a n d s | h u n d r e d s | t e n s | u n i t s |
| 5 | 5 | 6 | 7 |

| | | | |
|---|--------------------------------------|------------------|-----------------------|
| t h o u s a n d s | h u n d r e d s | t e n s | u n i t s |
| 3 | 5 | 6 | 7 |

4/2 Find 1000 more or less

| | | | |
|---|--------------------------------------|------------------|-----------------------|
| t h o u s a n d s | h u n d r e d s | t e n s | u n i t s |
| 4 | 5 | 6 | 7 |

To increase or decrease by 1000 this is the digit that changes.

4567 has increased

4567 has decreased

4/2 Round to nearest 10, 100, 1000.

Example 1- Round 4**2**79 to the nearest **1000**

- o Step 1 - Find the 'round-off digit' - **4**
- o Step 2 - Look one digit to the right of **4** - **2**

5 or more? NO - leave 'round off digit' unchanged
- Replace following digits with zeros

ANSWER - 4000

Example 2- Round 42**7**9 to the nearest **10**

- o Step 1 - Find the 'round-off digit' - **7**
- o Step 2 - Look one digit to the right of **7** - **9**

5 or more? YES - Add one to the 'round off digit'
- Replace following digits with zeros

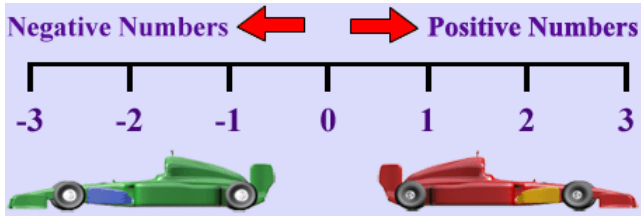
ANSWER - 4280

4/3 Negative numbers

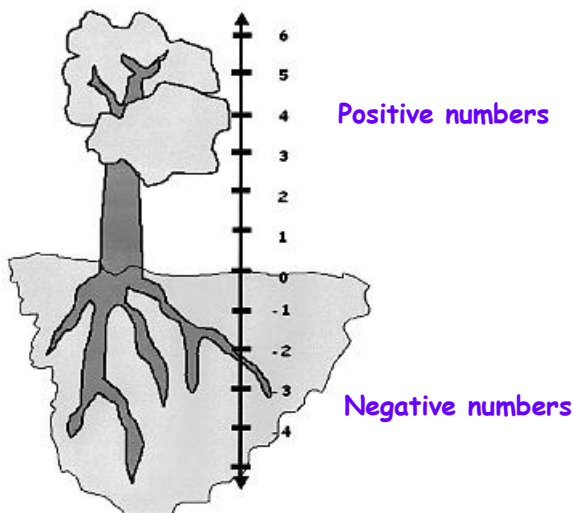
Negative numbers are numbers BELOW ZERO

Think of a number line

- Horizontal number line



- Vertical number line



4/4 Place value

| t h o u s a n d s | h u n d r e d s | t e n s | u n i t s |
|---|--------------------------------------|------------------|-----------------------|
| 3 | 7 | 4 | 8 |

3000

700

4/5 Roman Numerals to 100

The numbers 1-100 are constructed from these:

I = 1
V = 5
X = 10
L = 50
C = 100

| | | | | | | | |
|-------|----|---------|----|--------|----|----------|-----|
| I | 1 | XXVI | 26 | LI | 51 | LXXVI | 76 |
| II | 2 | XXVII | 27 | LII | 52 | LXXVII | 77 |
| III | 3 | XXVIII | 28 | LIII | 53 | LXXVIII | 78 |
| IV | 4 | XXIX | 29 | LIV | 54 | LXXIX | 79 |
| V | 5 | XXX | 30 | LV | 55 | LXXX | 80 |
| VI | 6 | XXXI | 31 | LVI | 56 | LXXXI | 81 |
| VII | 7 | XXXII | 32 | LVII | 57 | LXXXII | 82 |
| VIII | 8 | XXXIII | 33 | LVIII | 58 | LXXXIII | 83 |
| IX | 9 | XXXIV | 34 | LIX | 59 | LXXXIV | 84 |
| X | 10 | XXXV | 35 | LX | 60 | LXXXV | 85 |
| XI | 11 | XXXVI | 36 | LXI | 61 | LXXXVI | 86 |
| XII | 12 | XXXVII | 37 | LXII | 62 | LXXXVII | 87 |
| XIII | 13 | XXXVIII | 38 | LXIII | 63 | LXXXVIII | 88 |
| XIV | 14 | XXXIX | 39 | LXIV | 64 | LXXXIX | 89 |
| XV | 15 | XL | 40 | LXV | 65 | XC | 90 |
| XVI | 16 | XLI | 41 | LXVI | 66 | XCI | 91 |
| XVII | 17 | XLII | 42 | LXVII | 67 | XCII | 92 |
| XVIII | 18 | XLIII | 43 | LXVIII | 68 | XCIII | 93 |
| XIX | 19 | XLIV | 44 | LXIX | 69 | XCIV | 94 |
| XX | 20 | XLV | 45 | LXX | 70 | XCV | 95 |
| XXI | 21 | XLVI | 46 | LXXI | 71 | XCVI | 96 |
| XXII | 22 | XLVII | 47 | LXXII | 72 | XCVII | 97 |
| XXIII | 23 | XLVIII | 48 | LXXIII | 73 | XCVIII | 98 |
| XXIV | 24 | XLIX | 49 | LXXIV | 74 | XCIX | 99 |
| XXV | 25 | L | 50 | LXXV | 75 | C | 100 |

4/6 Add & subtract

- Line up digits from right to left

Example 1: Add 4735 and 386

$$\begin{array}{r} 4735 \\ 386+ \\ \hline \end{array}$$

$$\begin{array}{r} 5121 \\ 111 \\ \hline \end{array}$$

$$\begin{array}{r} 4735 \\ 386+ \\ \hline \end{array}$$

$$\begin{array}{r} 1 \quad 1 \quad 1 \\ 5121 \\ \hline \end{array}$$

Example 2: Subtract 637 from 2476

$$\begin{array}{r} 2114 \ 7616 \\ - 637- \\ \hline \end{array}$$

$$\underline{1839}$$

$$\begin{array}{r} 214 \ 716 \\ - 637- \\ \hline \end{array}$$

$$\begin{array}{r} \\ \underline{1839} \end{array}$$

4/7 Estimate a calculation

- Round off each number so that the calculation is easy to do

Example 1: 644×11

To make it easy use:

$$600 \times 11 = 6600 \text{ or } 600 \times 10 = 6000$$

Example 2: $503.926 + 709.328$

To make it easy use:

$$500 + 700 = 1200$$

Example 3: Half of 51.4328963

To make it easy use:

$$\text{Half of } 50 = 25$$

Example 3: $806 - 209$

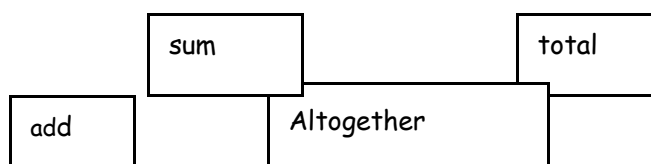
To make it easy use:

$$800 - 200 = 600$$

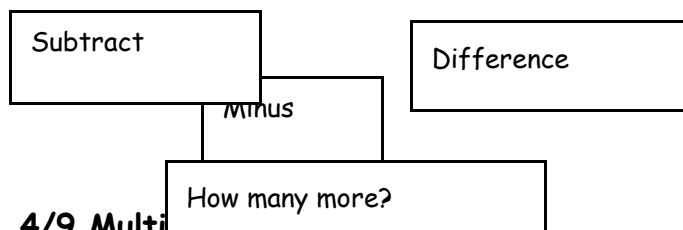
4/8 Addition & subtraction problems

(Based upon 4/6)

Words associated with addition:



Words associated with subtraction:



4/9 Multi

Times Table - 12x12

| | 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 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 30 | 33 | 36 |
| 4 | 4 | 8 | 12 | 16 | 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 | 8 | 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 |

Remember:

$$7 \times 8 = 56 \quad 8 \times 7 = 56 \quad 56 \div 7 = 8 \quad 56 \div 8 = 7$$

4/10 Factor pairs

The number 12 can be made from these factor pairs

$$\begin{array}{l} 1 \times 12 \\ 2 \times 6 \\ 3 \times 4 \\ 4 \times 3 \\ 6 \times 2 \\ 12 \times 1 \end{array}$$

From these factor pairs we can see that the factors of 12 are: 1, 2, 3,

4/11 Multiply by a single digit number

Example: 342×7

$$\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \end{array}$$

$$\begin{array}{r} 342 \\ \times 7 \\ \hline 2394 \end{array}$$

$$300 \times 7 = 2100$$

$$40 \times 7 = 280$$

$$2 \times 7 = 14$$

$$2394 + 2100 + 280 + 14 = 4788$$

4/12 Connections between 2 sums

- Look for connections between the 2 sums

Example: We know $342 \times 7 = 2394$ (See above)

$$\begin{array}{r} \times 2 \\ \times 2 \end{array}$$

So we also know $342 \times 14 = 4788$

Example: We know $342 \times 7 = 2394$ (See above)

$$\begin{array}{r} \times 2 \\ \times 2 \end{array}$$

So we also know $684 \times 7 = 4788$

Example: We know $342 \times 7 = 2394$ (See above)

$$+1$$

So we also know $342 \times 8 = 2394 + (342 \times 1)$
 $= 2736$

4/13 Common equivalent fractions

- The same fraction can be expressed in different ways

ALL THESE ARE $\frac{1}{2}$

$$\frac{1}{2} = \frac{2}{4} = \frac{3}{6} = \frac{8}{16}$$

ALL THESE ARE $\frac{3}{4}$

$$\frac{3}{4} = \frac{6}{8} = \frac{9}{12} = \frac{18}{24}$$

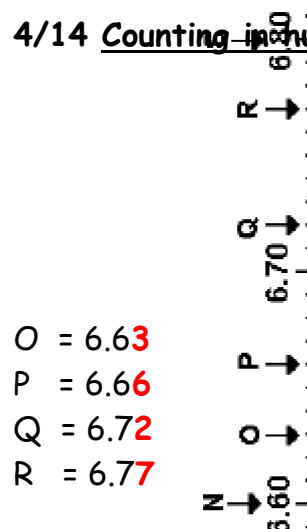
4/14 Hundredths

| | | | | |
|------------------|-----------------------|---|----------------------------|--|
| t e n s | u n i t s | • | t e n t h s | h u n d r e d t h s |
| 8 | 2 | | 6 | 4 |

- This represents 4 hundredths = $\frac{4}{100}$

- To find a hundredth of an object or quantity you divide by 100

4/14 Counting in hundredths (continued)



4/15 Add & subtract fractions

- To add and subtract fractions

When the denominators are the same

$$\frac{5}{8} + \frac{3}{8} = \frac{8}{8} = 1$$

Do not add

$$\frac{5}{8} - \frac{1}{8} = \frac{4}{8}$$

Do not subtract

4/16 Decimal equivalents

| | | |
|-----------------------|--|----------------------------|
| u n i t s | | t e n t h s |
| 0 | | 6 |

$$0.6 \Leftrightarrow \frac{6}{10}$$

| | | | |
|-----------------------|--|----------------------------|--|
| u n i t s | | t e n t h s | h u n d r e d t h s |
| 0 | | 0 | 3 |

$$0.03 \Leftrightarrow \frac{3}{100}$$

| | | | |
|-----------------------|--|----------------------------|--|
| u n i t s | | t e n t h s | h u n d r e d t h s |
| 0 | | 6 | 3 |

$$0.63 \Leftrightarrow \frac{63}{100}$$

4/16 Decimal equivalents

Others to learn are:

$$\frac{1}{4} = 0.25 \quad \frac{1}{2} = 0.5 \quad \frac{3}{4} = 0.75$$

4/17 Effect of dividing by 10 and 100

- To divide by 10, move each digit one place to the right

e.g. $35 \div 10 = 3.5$

| | | |
|------|-------|--------|
| Tens | Units | tenths |
| 3 | 5 | |
| | 3 | 5 |

- To divide by 100, move each digit 2 places to the right

e.g. $35 \div 100 = 0.35$

(we add a zero to show there are no whole numbers)

| | | | |
|------|-------|--------|------------|
| Tens | Units | tenths | hundredths |
| 3 | 5 | | |
| | 0 | 3 | 5 |

4/18 Round decimals to nearest whole

The Rules:

- If the digit behind the decimal point is LESS THAN 5, the number is rounded DOWN to the next whole number

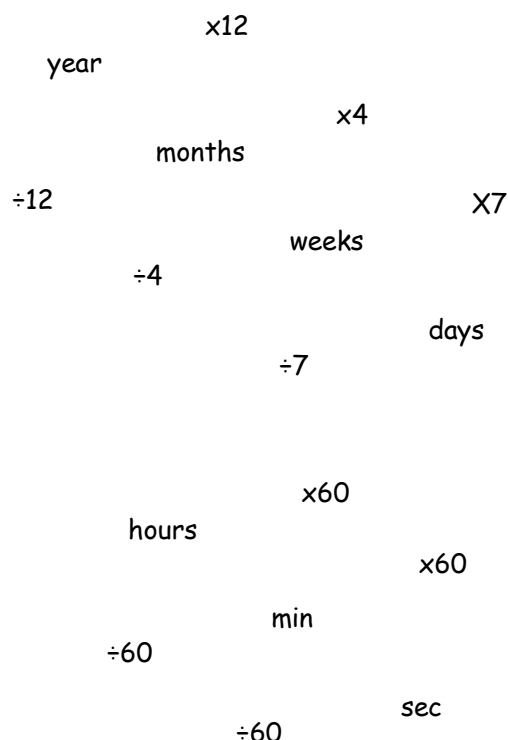
Example: 6.4 becomes rounded to 6

- If the digit behind the decimal point is 5 OR MORE, the number is rounded UP to the next whole number

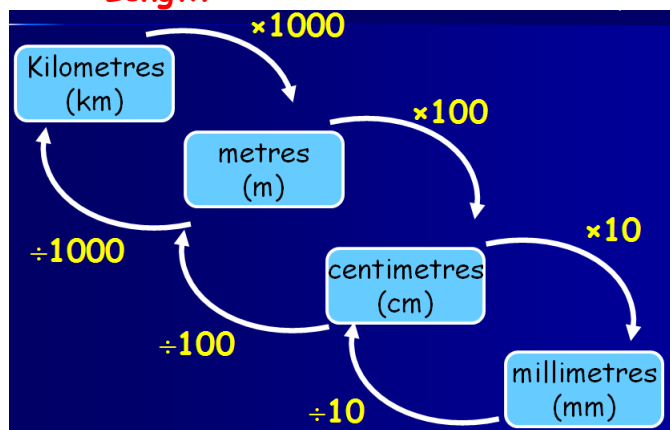
Example: 6.5 becomes rounded to 7
6.8 becomes rounded to 7

4/19 Convert between units of measure

- Time**



- Length



- Mass or weight

kilograms $\times 1000$
grams

$\div 1000$

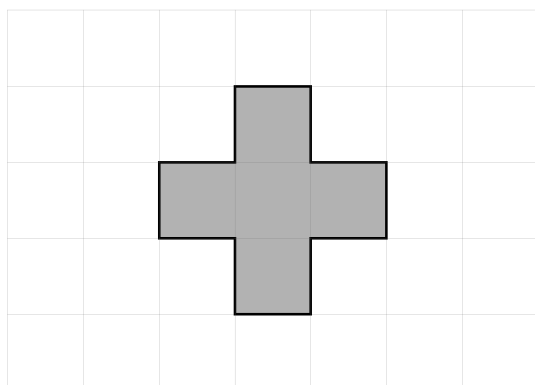
- Capacity or volume

litres $\times 1000$
millilitres

4/21 Perimeter & area by counting

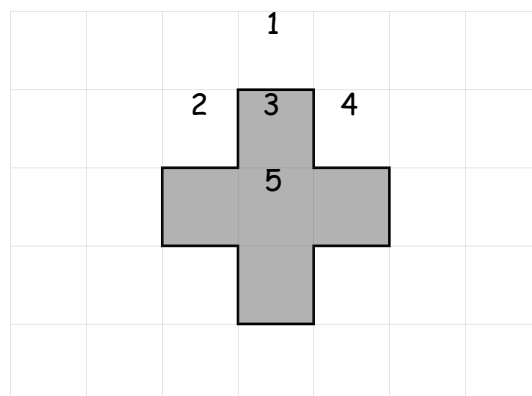
- Perimeter is round the **OUTSIDE**

Perimeter of this shape = 12cm



- Area is the number of squares **INSIDE**

Area of this shape = 5cm²



4/21 Estimate measures

- Capacity



a 5ml spoon



a 330ml can of drink



an average bucket holds 10 litres

4/21 Estimate measures - continued

- Mass



this apple weighs 125g



this bag of sugar weighs 1kg



this man weighs 70kg

- Length



this pencil is 17cm long



length of classroom is 10m



distance to Exeter is 64miles

| MORNING in 24-Hour Clock | | | | | | | | | | | |
|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 0000 | 0100 | 0200 | 0300 | 0400 | 0500 | 0600 | 0700 | 0800 | 0900 | 1000 | 1100 |
| 12:00am (midnight) | 1:00am | 2:00am | 3:00am | 4:00am | 5:00am | 6:00am | 7:00am | 8:00am | 9:00am | 10:00am | 11:00am |
| MORNING in 12-Hour Clock | | | | | | | | | | | |

| AFTERNOON in 24-Hour Clock | | | | | | | | | | | |
|----------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 |
| 12:00pm (midday) | 1:00pm | 2:00pm | 3:00pm | 4:00pm | 5:00pm | 6:00pm | 7:00pm | 8:00pm | 9:00pm | 10:00pm | 11:00pm |
| AFTERNOON in 12-Hour Clock | | | | | | | | | | | |

TRIANGLES angles add up to 180°

Isosceles triangle

- 2 equal sides
- 2 equal angles
- 1 line of symmetry
- No rotational symmetry

Equilateral triangle

- 3 equal sides
- 3 equal angles - 60°
- 3 lines of symmetry
- Rotational symmetry order 3

QUADRILATERALS - all angles add up to 360°

Square

- 4 equal sides
- 4 equal angles - 90°
- 4 lines of symmetry
- Rotational symmetry order 4

4/22 12- and 24-hour clock



Rectangle

- Opposite sides equal
- 4 equal angles - 90°
- 2 lines of symmetry
- Rotational symmetry order 2

Parallelogram

- Opposite sides parallel
- Opposite angles equal
- NO lines of symmetry
- Rotational symmetry order 2

Rhombus (like a diamond)

- Opposite sides parallel
- Opposite angles equal
- 2 lines of symmetry
- Rotational symmetry order 2

4/24 Types of angles

| Acute | Right | Obtuse |
|---------------------------|-------------------------|---|
| (less than 90°) | (Exactly 90°) | (Between 90° & 180°) |

Straight line

(180° or two right angles)

4/23 - Properties of quadrilaterals & Triangles (continued)

Trapezium

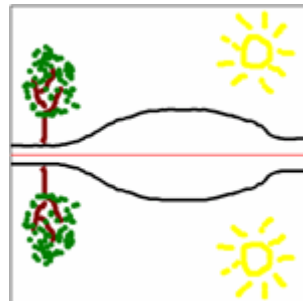
- ONE pair opposite sides parallel

Kite

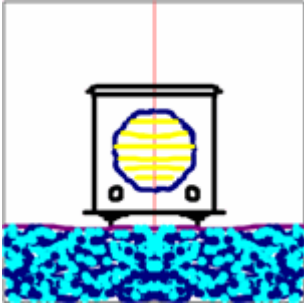
- One pair of opposite angles equal
- 2 pairs of adjacent sides equal
- ONE line of symmetry
- No rotational symmetry

4/25 Identify lines of symmetry

- Horizontal line of symmetry



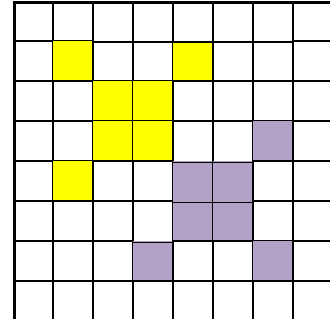
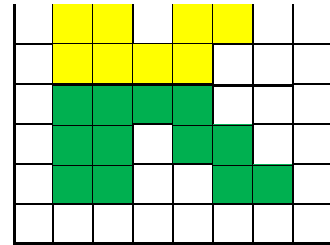
- Vertical line of symmetry



- Oblique line of symmetry

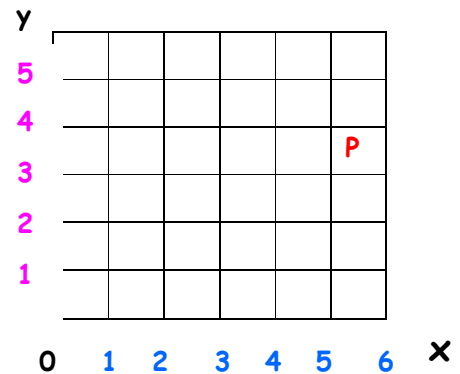


- Horizontal, Vertical & Oblique lines of symmetry



4/27 Describe position of points

- The horizontal axis is the x-axis
- The vertical axis is called the y-axis
- The origin is where the axes meet
- A point is described by two numbers
The 1st number is off the x-axis
The 2nd number is off the y-axis



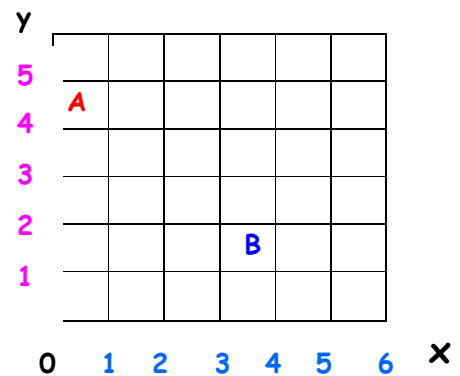
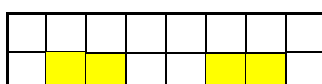
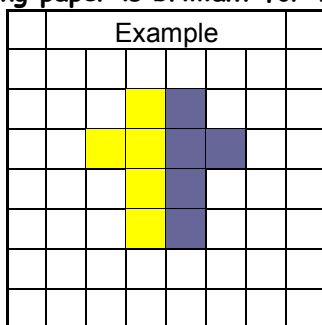
Origin (0,0)

P is (5, 3)

4/27 Describe movement of shapes

4/26 Complete a symmetrical figure

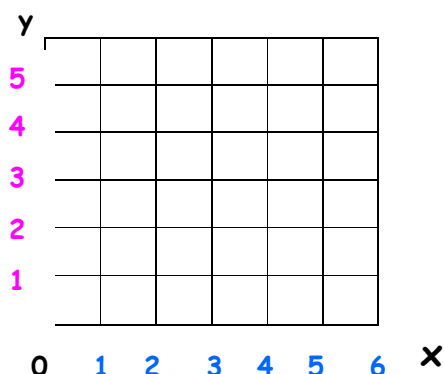
- Tracing paper is brilliant for this



Shape A has been moved 3 squares right and 2 down.
This movement is called TRANSLATION

4/28 Complete a 2D shape

Example: Draw on lines to complete parallelogram



4/29 Present discrete & continuous data

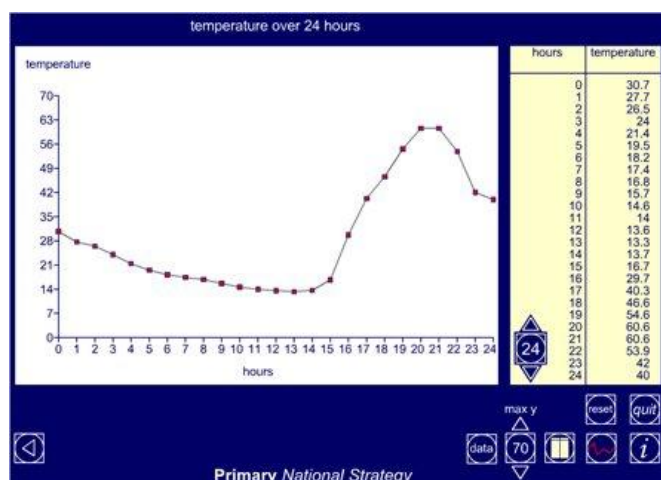
Discrete data is counted
e.g. cars, students, animals

Graph to show favourite colours in Class 4

4/29 Present discrete & continuous data

Continuous data is measured
e.g. heights, times, temperature

Graph to show a patient's temperature over 24h



4/30 Compare data in graphs

'Sum' or 'total' means 'add up'

'Difference' or 'how many more' means 'subtract'

Bar chart to show Number of Ice Creams sold in a week

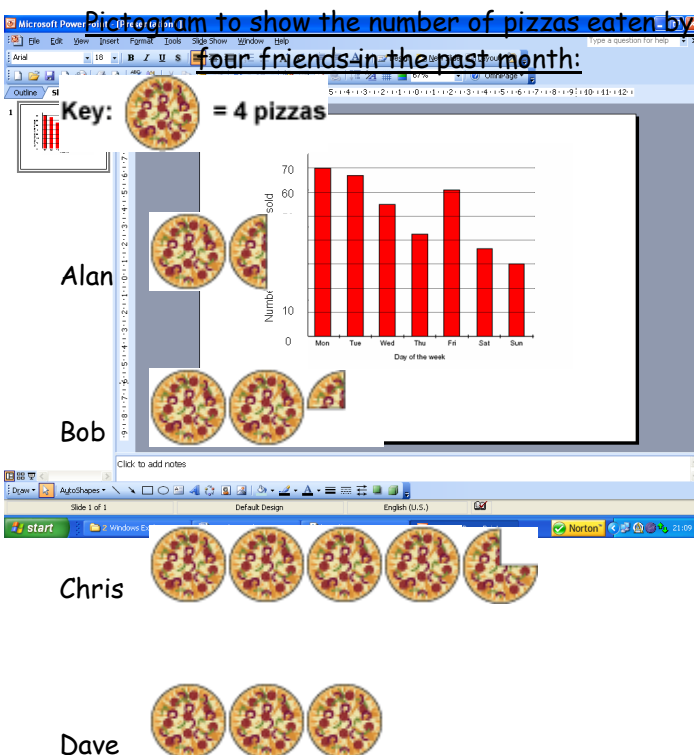
- (i) What is the total number of ice creams sold over the weekend?

Answer: $37 + 30 = 67$

- (ii) How many more were sold on Friday than Saturday?

Answer: $61 - 37 = 24$

Pictogram to show the number of pizzas eaten by four friends in the past month:



- (i) What is the sum of the number of pizzas eaten in the month

Answer: $6 + 9 + 19 + 12 = 46$

- (ii) Find the difference in the number eaten by Chris and Bob

Answer: $19 - 9 = 10$