Find the missing number.

a) [ ] + 3.1 = 15.9

b) 8.7 + [ ] = 19

c) [ ] + 3.7 = 14

d) 2.3 + [ ] = 23

e) 7.3 + [ ] = 20

Find the missing number.

a) [ ] + 3.1 + 4 = 17.9

b) 8.7 + 1.4 + [ ] =

c) 4.5 + [ ] + 3.7 = 19

d) 2.3 + 1.1. + [ ] = 10

e) 7.3 + 1.7 + [ ] = 20

Find the missing number.

a) [ ] x 2 = 120

b) ◯ x ◯ = 81 ◯ =

c) 7 x [ ] = 63

d) 10 x [ ] = 1230

e) ◯ x ◯ = 144 ◯ =

Find the missing number.

a) ⬠ x ⬠ = 169 ⬠ =

b) ⬠ x ⬠ = 196 ⬠ =

c) ◯ x ◯ x ◯ = 125 ◯ =

d) 10 x ⬠ x ⬠ = 360 ⬠ =

e) ⬠ x ⬠ x 2 = 72 ⬠ =

Find the missing number.

a) 150 ÷ [ ] = 25

b) 121 ÷ ◯ = ◯ ◯ =

c) 96 ÷ 4 = [ ]

d) 365 ÷ 100 = [ ]

a) ◯ ÷ 10 = 14

Find the missing number.

a) ⬠ ÷ 9 = 140

b) 8.1 ÷ ⬠ = 0.81

c) ⬠ ÷ 100 = 12.9

d) 125 ÷ ⬠ ÷ ⬠ = ⬠ ⬠ =

e) 5270 ÷ ⬠ = 52.7

Find the missing number

a) [12.8] + 3.1 = 15.9

b) 8.7 + [10.3] = 19

c) [10.3] + 3.7 = 14

d) 2.3 + [20.7] = 23

e) 7.3 + [12.7] = 20

Find the missing number

a) [10.8] + 3.1 + 4 = 17.9

b) 8.7 + 1.4 + [10.9] = 21

c) 4.5 + [10.8] + 3.7 = 19

d) 2.3 + 1.1. + [6.6] = 10

e) 7.3 + 1.7 + [11] = 20

Find the missing number

a) [60] x 2 = 120

b) (9) x (9) = 81 ◯ = 9

c) 7 x [9] = 63

d) 10 x [123] = 1,230

e) (12) x (12) = 144 ◯ = 12

Find the missing number

a) (13) x (13) = 169 ⬠ = 13

b) (14) x (14) = 196 ⬠ = 14

c) (5) x (5) x (5) = 125 ◯ = 5

d) 10 x (6) x (6) = 360 ⬠ = 6

e) (6) x (6) x 2 = 72 ⬠ = 6

Find the missing number

a) 150 ÷ [6] = 25

b) 121 ÷ (11) = (11) ◯ = 11

c) 96 ÷ 4 = 24

d) 365 ÷ 100 = 3.65

a) (140) ÷ 10 = 14

Find the missing number

a) (1,260) ÷ 9 = 140

b) 8.1 ÷ (10) = 0.81

c) (1,290) ÷ 100 = 12.9

d) 125 ÷ (5) ÷ (5) = (5) ⬠ = 5

e) 5,270 ÷ (100) = 52.7

Find the missing number.

a) 17.9 - [ ] = 15.2

b) 23.9 - [ ] = 20.8

c) [ ] - 2.1 = 14.5

d) 20.3 - [ ] = 20

e) 18.9 - [ ] = 10.5

Find the missing number.

a) 12.4 - [ ] = 9.9

b) 20.5 - [ ] = 18.6

c) [ ] - 5.2 = 24.8

d) 101 - [ ] = 87.3

e) 16.9 - ⬠ - ⬠ = 12.3 ⬠ =

Calculate these mentally. What's the quickest route? Circle the numbers you will add first.

a) 19. 8 + 6 + 1.2 =

b) 26.1 + 13.9 + 11.3 =

c) 15 + 14.5 + 3.5 =

d) 10 + 8.2 + 1.8 =

Calculate these mentally. What's the quickest route? Circle the numbers you will add first.

a) 11.1 + 11.1 + 10.8 =

b) 15.1 + 15.9 + 15.1 =

c) 0.8 + 5.8 + 22.4 =

d) 20 + 80 + 9.8 =

Are these calculations the same? Explain. Work them out.

56.4 + 23.5 – 10.5 =

56.4 + (23.5 – 10.5) =

Are these calculations the same? Explain. Work them out.

46.7 - 27.5 + 10.3 =

46.7 - (27.5 + 10.3) =

Find the missing number

a) 17.9 - [2.7] = 15.2

b) 23.9 - [3.1] = 20.8

c) [16.6] - 2.1 = 14.5

d) 20.3 - [0.3] = 20

e) 18.9 - [8.4] = 10.5

Find the missing number

a) 12.4 - [2.5] = 9.9

b) 20.5 - [1.9] = 18.6

c) [30] - 5.2 = 24.8

d) 101 - [13.7] = 87.3

e) 16.9 - 2.3 - 2.3 = 12.3 = 2.3

Calculate these mentally. What's the quickest route?
Circle the numbers you will add first.

a) 19. 8 + 6 + 1.2 = 27

b) 26.1 + 13.9 + 11.3 = 51.3

c) 15 + 14.5 + 3.5 = 33

d) 10 + 8.2 + 1.8 = 20

Calculate these mentally. What's the quickest route?
Circle the numbers you will add first.

a) 11.1 + 11.1 + 10.8 = 33

b) 15.1 + 15.9 + 15.1 = 46.1

c) 0.8 + 5.8 + 22.4 = 29

d) 20 + 80 + 9.8 = 109.8

Are these calculations the same? Explain.
Work them out.

56.4 + 23.5 – 10.5 = 79.9 – 10.5 = 69.4

56.4 + (23.5 – 10.5) = 56.4 + 13 = 69.4

Are these calculations the same? Explain.
Work them out.

46.7 - 27.5 + 10.3 = 19.2 + 10.3 = 29.5

46.7 - (27.5 + 10.3) = 46.7 – 37.8 = 8.9

What digit does each ⬡ represent?

$$\begin{array}{r} 7\,\square \\ +\ \square\ 5 \\ \hline 1\ 4\ 1 \end{array}$$

$$\begin{array}{r} \square\,\square \\ +\ \square\,\square \\ \hline 9\ 6 \end{array}$$

$$\begin{array}{r} \square\ 2 \\ +\ \square\,\square \\ \hline \square\ 5 \end{array}$$

$$\begin{array}{r} 2\,\square \\ +\ \square\,\square \\ \hline 9\ 8 \end{array}$$

What digit does △ and ⬡ represent?

$$\begin{array}{r} \triangle\,\square \\ +\ \square\ \square \\ \hline 9\ 5 \end{array}$$

$$\begin{array}{r} 2\,\square \\ +\ \square\,\square \\ \hline 8\ 8 \end{array}$$

What is the greatest natural number ⬡ can represent?

a) $\square + 5 \times \square < 421$

b) $50 > \square \times 8 + 2$

c) $\square - 50 < \square < 80$

d) $44 - \square = \square < 40$

What is the greatest natural number ⬡ can represent?

a) $50 \div \square < 40 + \square$

b) $2 \times 11 = 120 \div \square + \square$

c) $\square \div 50 < \square$

d) $125 \div \square = 20 + 5$

Which number will change value when you add '0' to the end of it? Circle it.

a) 16.3 163 1.63 0.163

b) 90 0.9 0.09 0.009

c) 1.07 1.7 0.17 17

Put these in order from the longest to the shortest.

a) 30m 130cm 303cm 3km 3.3m

_____

b) 10800mm 18 cm 8m 0.08km

_____

c) 84cm 8.04cm 0.84 km 80000mm

_____

What digit does each ⬡ represent?

$$\begin{array}{r} 7\,6 \\ +\ 6\,5 \\ \hline 1\,4\,1 \end{array} \qquad \begin{array}{r} 8\,8 \\ +\ \ 8 \\ \hline 9\,6 \end{array}$$

$$\begin{array}{r} 7\,2 \\ +\ \ 7 \\ \hline 7\,9 \end{array} \qquad \begin{array}{r} 6 \\ 2\,6 \\ +\ 6\,6 \\ \hline 9\,8 \end{array}$$

What digit does △ and ⬡ represent?

$$\begin{array}{r} 9 \\ 7 \\ +\ 7\,9 \\ \hline 9\,5 \end{array} \qquad \begin{array}{r} 8 \\ 2\,5 \\ +\ 5\,5 \\ \hline 8\,8 \end{array}$$

What is the greatest natural number ⬡ can represent?

a) 70 + 5 x 70 < 421

b) 50 > 5 x 8 + 2

c) 79 - 50 < 79 < 80

d) 44 - 21 > 21 < 40

What is the greatest natural number ⬡ can represent?

a) 50 ÷ ⬡ < 40 + ⬡ — No such number

b) 2 x 11 = 120 ÷ 12 + 12

c) ⬡ ÷ 50 > 0.9 — No such number

d) 125 ÷ 5 = 20 + 5

Which number will change value when you add '0' to the end of it? Circle it.

a) 16.3 **163** 1.63 0.163

b) **90** 0.9 0.09 0.009

c) 1.07 1.7 0.17 **17**

Put these in order from the longest to the shortest.

a) 30m 130cm 303cm 3km 3.3m

3km 30m 3.3m 303cm 130cm

b) 10800mm 18 cm 8m 0.08km

0.08km 8m 10800mm 18cm

c) 84cm 8.04cm 0.84 km 80000mm

0.84km 80000mm 84cm 8.04cm

Find the missing number.

a) 17.8 + (◯ - 11.2) = 26.6

b) 12.3 + 12 – ◯ = 13.1

c) 16 – ◯ + 11.1 = 22.2

d) ◯ – (0.9 + 20.5) = 7.5

e) 19.4 - 11.3 – ◯ = 0.1

Is the missing number the same in both number sentences? Explain and calculate to prove your answer.

a) 19.8 + (◯ - 10.2) = 23.6

19.8 + ◯ - 10.2 = 23.6

b) ◯ - (4 + 10.2) = 26

◯ - 4 + 10.2 = 26

Write the correct sign < > = and calculate these to prove your answer.

14 + 3 – 6 ☐ 14 - 3 + 6

11 + 3 x 6 ☐ (11 + 3) x 6

12 + 12 ÷ 6 ☐ (12 + 12) ÷ 6

15 - 2 x 6 + 1 ☐ (15 – 2) x (6 + 1)

Add brackets to make each calculation correct.

14 x 10 + 14 – 10 + 9 = 153

14 x 10 + 14 – 10 + 9 = 135

14 x 10 + 14 – 10 + 9 = 335

14 x 10 + 14 – 10 + 9 = 205

14 x 10 + 14 – 10 + 9 = 322

Jack thinks that if you include brackets to each equation in any place, the answer will stay the same. Is he correct? Prove it.

a) 3 x 8 x 1 =

b) 2 x 7 + 3 =

???

Jack thinks that if you include brackets to each equation in any place, the answer will stay the same. Is he correct? Prove it.

a) 15 – 2 + 10 =

b) 4 + 10 – 7 =

???

Find the missing number.

a) 17.8 + (20 - 11.2) = 26.6

b) 12.3 + 12 – 11.2 = 13.1

c) 16 – 4.9 + 11.1 = 22.2

d) 28.9 – (0.9 + 20.5) = 7.5

e) 19.4 - 11.3 – 8 = 0.1

Is the missing number the same in both number sentences? Explain and calculate to prove your answer.

a) 19.8 + (14 - 10.2) = 23.6

19.8 + 14 - 10.2 = 23.6

a) 40.2 - (4 + 10.2) = 26

19.8 - 4 + 10.2 = 26

Write the correct sign < > = and calculate these to prove your answer.

14 + 3 – 6 11	<	14 - 3 + 6 17
11 + 3 x 6 29	<	(11 + 3) x 6 84
12 + 12 ÷ 6 14	>	(12 + 12) ÷ 6 4
15 - 2 x 6 + 1 4	>	(15 – 2) x (6 + 1) 91

Add brackets to make each calculation correct.

14 x 10 + (14 – 10) + 9 = 153

14 x 10 + 14 – (10 + 9) = 135

14 x (10 + 14) – 10 + 9 = 335

14 x (10 + 14 – 10) + 9 = 205

14 x (10 + 14 – 10 + 9) = 322

Jack thinks that if you include brackets to each equation in any place, the answer will stay the same. Is he correct? Prove it.

a) 3 x 8 x 1 = True

b) 2 x 7 + 3 = False

???

Jack thinks that if you include brackets to each equation in any place, the answer will stay the same. Is he correct? Prove it.

a) 15 – 2 + 10 = False

b) 4 + 10 – 7 = True

???

Leon and Mary are wrapping Christmas presents.
They have a 60m ribbon reel. Each present needs 120cm ribbon. How many presents can they wrap with this ribbon?
Prove it with your calculations.

Leon and Mary are wrapping Christmas presents.
They have a 84m ribbon reel and a 50m ribbon reel.
Each present needs 140cm of ribbon.
How many presents can they wrap with this ribbon? How much ribbon will they have left in cm.
Prove it with your calculations.

Convert:

a) 1453g = _____kg

b) 0.06 km = _____m

c) 1050cm = _____m

d) 00.4 kg = _____g

e) 7320m = _____km

f) 20000ml = _____l

Convert:

a) 6 km^2 = _____m^2

b) 1050cm^2 = _____m^2

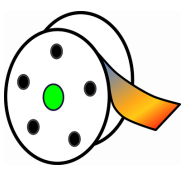
c) 0.7320 m^2 = _____cm^2

d) 1ha (hectare) = _____m^2

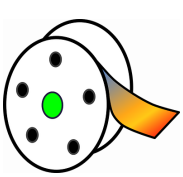
e) 1ha = _____ ares

f) 1 are = _____m^2

The ribbon was 20 m long. Leon cut off 11.6 m of the ribbon and Mary cut off 1.8m. What is the length of the ribbon remaining?



The ribbon was 32 m long. Leon cut off 70 cm of the ribbon and Mary cut off 110 cm. What is the length of the ribbon remaining?



Leon and Mary are wrapping Christmas presents.
They have a 60m ribbon reel. Each present needs 120cm ribbon. How many presents can they wrap with this ribbon?
Prove it with your calculations.

120 cm = 1.2 m

60m ÷ 1.2m = 600 ÷ 12 = 50

They can wrap 50 presents.

50

Leon and Mary are wrapping Christmas presents.
They have a 84m ribbon reel and a 50m ribbon reel.
Each present needs 140cm of ribbon.
How many presents can they wrap with this ribbon? How much ribbon will they have left in cm.
Prove it with your calculations.

140 cm = 1.4 m

84m ÷ 1.4m = 800 ÷ 14 = 60

50m ÷ 1.4m = 500 ÷ 14 = 35 r 10
Equivalent to 35 r 1m

They can wrap 95 presents.

They will have 1m =100cm of ribbon left.

100 cm

Convert:

a) 1,453g = 1.453kg

b) 0.06 km = 60m

c) 1,050cm = 10.5 m

d) 0.4 kg = 400 g

e) 7,320m = 7.32 km

f) 20,000ml = 20l

Convert:

a) 6 km^2 = 6 000 000m^2

b) 1,050cm^2 = 0.105 m^2

c) 0.7320 m^2 = 7,320 cm^2

d) 1ha (hectare) = 10 000 m^2

e) 1ha = 100 ares

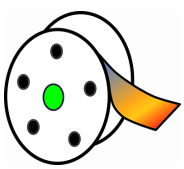
f) 1 are = 100m^2

The ribbon was 20 m long. Leon cut off 11.6 m of the ribbon and Mary cut off 1.8m. What is the length of the ribbon remaining?

20 - 11.6 – 1.8 = or 20 – (11.6 + 1.8) =

20 - 11.6 = 8.4 11.6 + 1.8 = 13.4

8.4 – 1.8 = 6.6 20 – 13.4 = 6.6



6.6 m

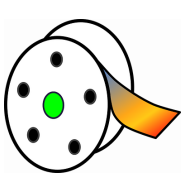
The ribbon was 32 m long. Leon cut off 70 cm of the ribbon and Mary cut off 110 cm. What is the length of the ribbon remaining?

32 m = 3,200 cm

110cm + 70cm = 180cm

3,200cm – 180cm = 3,020cm

3,020 cm = 30.2 m



30.2 m

The number is 34 529 451.

a) Round this number to the nearest:

million	
thousand	
hundred	
ten	

b) Divide this number by 100.

_____

c) Divide this number by 1000.

_____

The numbers have been rounded to the nearest ten. What could the actual number be to make these comparisons true. Find all the possibilities.

4 670 < 4 670

[ ] < [ ]

Estimate the answer by rounding to the nearest

4637 + 3281 =

thousand	
hundred	
ten	

Calculate the answer using a formal method.

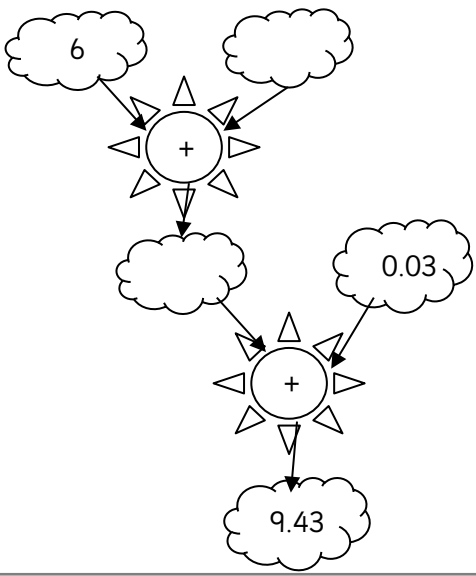
Estimate the answer by rounding to the nearest

4637 + 3281 + 1438 =

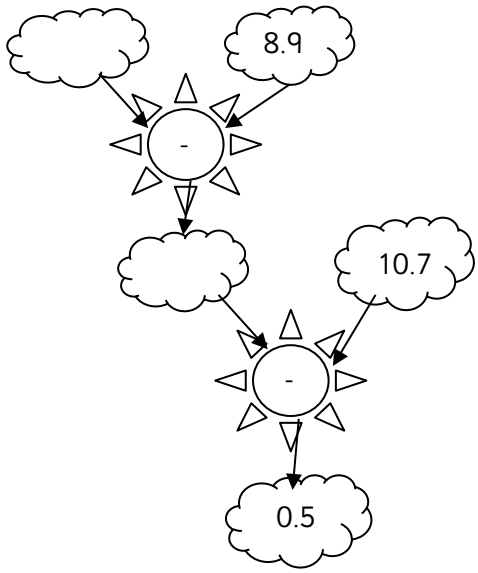
thousand	
hundred	
ten	

Calculate the answer using a formal method.

Fill in the numbers on the diagram.



Fill in the numbers on the diagram.



The number is 34 529 451.

a) Round this number to the nearest:

million	35 000 000
thousand	34 529 000
hundred	34 529 500
ten	34 529 450

b) Divide this number by 100

345,294.51

c) Divide this number by 1000

34,529.451

The numbers have been rounded to the nearest ten. What could the actual number be to make these comparisons true. Find all the possibilities.

4 670 < 4 670

4 665	<	4666, 4667,4668,4669
4 666	<	4667,4668,4669
4 667	<	4668,4669
4 668	<	4669

Estimate the answer by rounding to the nearest

4,637 + 3,281 = 7,918

thousand	8,000
hundred	7,900
ten	7,920

Calculate the answer using a formal method.

$$\begin{array}{r} 4637 \\ +\ 3281 \\ \hline 7918 \\ \scriptstyle 1 \end{array}$$

Estimate the answer by rounding to the nearest

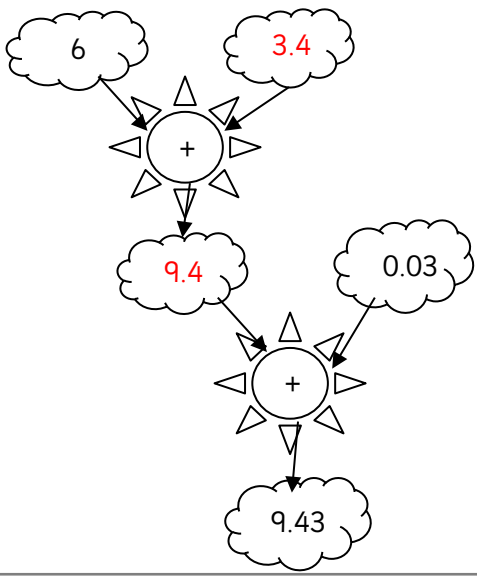
4,637 + 3,281 + 1,438 = 9,356

thousand	9,000
hundred	9,300
ten	9,360

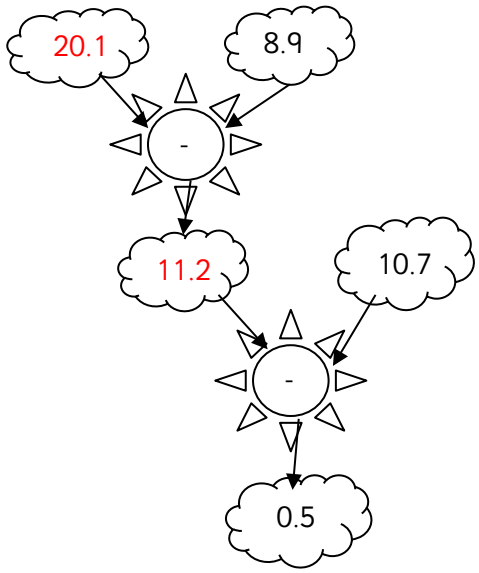
Calculate the answer using a formal method.

$$\begin{array}{r} 4637 \\ 3281 \\ +\ 1438 \\ \hline 9356 \\ \scriptstyle 1\ 1\ 1 \end{array}$$

Fill in the numbers on the diagram.

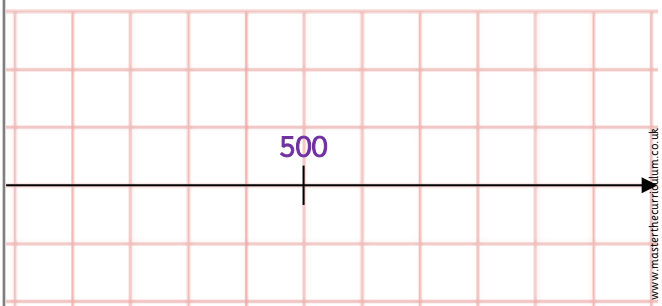


Fill in the numbers on the diagram.



Add these numbers to this empty number line.

536 509 499 450 403

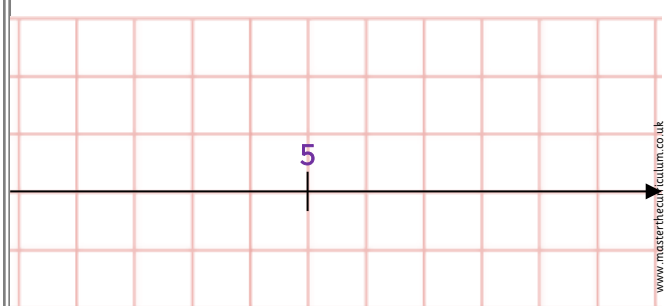


Which number is closest to 500?

Which number is furthest from 500?

Add these numbers to this empty number line.

5.13 5.36 4.99 4.9



Which number is closest to 5?

Which number is furthest from 5?

Order these prices from the lowest to the highest.

£345,908 £354,908 £354,980 £354,098 £345,098

_____

_____

_____

_____

_____

What's the difference between the highest and the lowest price?

Order these prices from the lowest to the highest.

£ 34 3040p £3.40 £0.03 multiplied by 10

_____

_____

_____

_____

What's the difference between the highest and the lowest price?

Round the numbers.

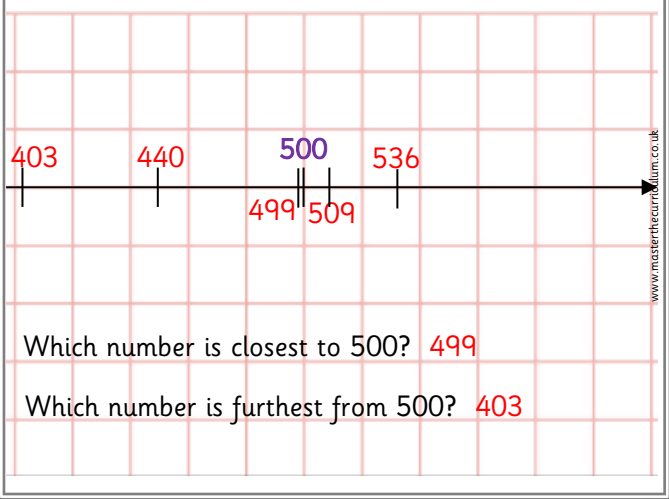
Round to	the nearest 10	The nearest 50	The nearest 100
3752			
8995			
16305			
31547			
185021			

Round the numbers.

Round to	the whole number	one decimal place	two decimal places
3.752			
8.995			
16.305			
31.547			
18.5021			

Add these numbers to this empty number line.

536 509 499 450 403

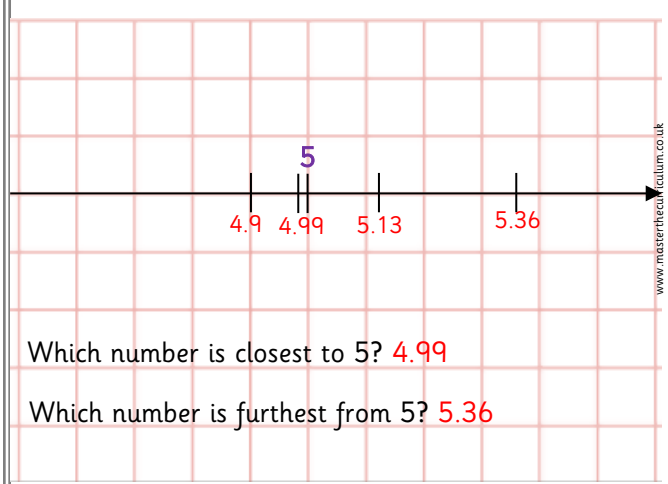


Which number is closest to 500? 499

Which number is furthest from 500? 403

Add these numbers to this empty number line.

5.13 5.36 4.99 4.9



Which number is closest to 5? 4.99

Which number is furthest from 5? 5.36

Order these prices from the lowest to the highest.

£345,908 £354,908 £354,980 £354,098 £345,098

£345,098

£345,908

£354,098

£354,908

£354,980

What's the difference between the highest and the lowest price?

354,980 – 345,098 = 9,882

Order these prices from the lowest to the highest.

£ 34 3040p £3.40 £0.03 multiplied by 10

£ 0.03 multiplied by 10

£3.40

3040p

£34

What's the difference between the highest and the lowest price?

34 – 0.3 = 33.7

Round the numbers.

Round to	the nearest 10	The nearest 50	The nearest 100
3,752	3,750	3,750	3,800
8,995	9,000	9,000	9,000
16,305	16,310	16,300	16,300
31,547	31,550	31,550	31,500
185,021	185,020	185,000	185,000

Round the numbers.

Round to	the whole number	one decimal place	two decimal places
3.752	4	3.8	3.75
8.995	9	9	9
16.305	16	16.3	16.31
31.547	32	31.5	31.55
18.5021	19	19.5	19.50

Look at the currency table for a British pound

		GBP per Unit
USD	US Dollar	0.817
EUR	Euro	0.852
GBP	British Pound	1.000
INR	Indian Rupee	0.011
AUD	Australian Dollar	0.587
CAD	Canadian Dollar	0.602
SGD	Singapore Dollar	0.563
CHF	Swiss Franc	0.795
MYR	Malaysian Ringgit	0.182
JPY	Japanese Yen	0.006
CNY	Chinese Yuan Renminbi	0.117

Complete:

a) 10 US Dollars = _____ British Pounds

b) 100 Euros = _____ British Pounds

c) 1000 Indian Rupees = _____ British Pounds

d) 100 Japanese Yen = _____ British Pounds

e) John wants to buy 100 US Dollars and 100 Canadian Dollars. How much money does he need (in pounds) altogether?

Answer questions about the chart below.

Cities, towns & districts	Population
Birmingham	1,020,589
Leeds	726,939
Glasgow	616,430
Sheffield	530,375

a) What is the total number of people living in Glasgow and Sheffield?

b) What's the difference between the numbers of people living in Leeds and Sheffield ?

c) How many more people live in Birmingham than in Leeds?

d) What is the total number of people living in Birmingham and Leeds?

Answer questions about the chart below.

Cities, towns & districts	Population	Males (% of tot
Birmingham	1,020,589	49.42
Leeds	726,939	49.43
Glasgow	616,430	47.73
Sheffield	530,375	49.73

a) Is this comparison true? Prove it.

Birmingham < Glasgow + Sheffield

b) What's the percentage of females in the city?

City	Males %	Females %
Birmingham	49.42	
Leeds	49.43	
Glasgow	47.73	
Sheffield	49.73	

c) How many more people would you have to add to the population of Sheffield to make this statement true.

Leeds = Sheffield

Look at the currency table for a British pound

		GBP per Unit
USD	US Dollar	0.817
EUR	Euro	0.852
GBP	British Pound	1.000
INR	Indian Rupee	0.011
AUD	Australian Dollar	0.587
CAD	Canadian Dollar	0.602
SGD	Singapore Dollar	0.563
CHF	Swiss Franc	0.795
MYR	Malaysian Ringgit	0.182
JPY	Japanese Yen	0.006
CNY	Chinese Yuan Renminbi	0.117

Complete:

a) 10 US Dollars = 8.17 British Pounds

b) 100 Euros = 85.2 British Pounds

c) 1000 Indian Rupees = 11 British Pounds

d) 100 Japanese Yen = 0.6 British Pounds

e) John wants to buy 100 US Dollars and 100 Canadian Dollars. How much money does he need (in pounds) altogether?

100 x 0.817 = 81.7

100 x 0.602 = 60.2

```
  81.7
+ 60.2
------
 141.9
```


Answer questions about the chart below.

Cities, towns & districts	Population
Birmingham	1,020,589
Leeds	726,939
Glasgow	616,430
Sheffield	530,375

a) What is the total number of people living in Glasgow and Sheffield?

616,430 + 530,375 = 1 146 805

b) What's the difference between the numbers of people living in Leeds and Sheffield ?

726,939 - 530,375 = 196 564

c) How many more people live in Birmingham than in Leeds?

1,020,589 – 726,939 = 293 650

d) What is the total number of people living in Birmingham and Leeds?

1,020,589 + 726,939 = 1 747 528

Answer questions about the chart below.

Cities, towns & districts	Population	Males (% of tot
Birmingham	1,020,589	49.42
Leeds	726,939	49.43
Glasgow	616,430	47.73
Sheffield	530,375	49.73

a) Is this comparison true? Prove it.

Birmingham < Glasgow + Sheffield

It's true.

616,430 + 530,375 = 1 146 805

1 020 589 < 1 146 805

b) What's the percentage of females in the city?

City	Males %	Females %
Birmingham	49.42	50.58
Leeds	49.43	50.57
Glasgow	47.73	52.27
Sheffield	49.73	50.27

c) How many more people would you have to add to the population of Sheffield to make this statement true.

Leeds = Sheffield

726,8939 - 530,375 = 196 564

Circle two numbers that make:

- **0.75** 0.11 0.25 0.20 0.24 0.51
- **2.4** 0.11 1.25 2.20 1.24 0.20
- **3.1** 2.1 2.15 1.05 3.00 2.05
- **1.90** 1.65 1.20 0.20 0.25 0.35

Can you make these number sentences true?

a) __ __ . __ + __ __ . __ = 35.6

b) __ __ . __ + __ . __ = 35.6

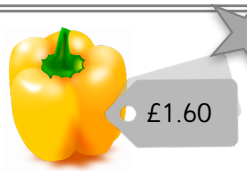
c) __ __ . __ __ + __ __ . __ __= 35.6

d) __ . __ __ + __ __ . __ __= 35.6

e) __ __ . __ - __ __ . __ = 35.6

f) __ __ . __ - __ __ . __ = 35.6

1 box = 6 eggs



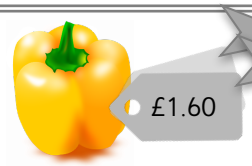
1 pepper = 10g

a) How much will you pay for 1 egg? _____

b) How much will you pay for 10 peppers? _____

c) John bought a box of eggs and 2 peppers. He paid with a £20 note. How much change did he get? _____ . Show how you worked it out.

1 box = 6 eggs



1 pepper = 10g

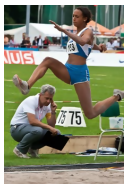
a) John bought a half of a box of eggs. He paid with a £20 note. How many peppers can he buy with the change that he got? Show how you worked it out. _____

During the sports day, Jack jumped 2.67m. Jenny beat him because she jumped 0.25m further than Jack. Dwayne was the winner because he jumped 0.10m further than Jenny. Work out the distance Jenny and Dwayne jumped and complete the table.

Name	Distance (m)
1st	
2nd	
3rd	

Dwayne won the long jump competition with a 2.82m jump. Jenny jumped half that distance. Dexter jumped 0.5m further than Jenny and Max jumped 0.25m less but closer than Dexter. Work out the distance each of them jumped and complete the table.

Name	Distance (m)
1st Dwayne	
2nd	
3rd	
4th	



Circle two numbers that make:

- **0.75** 0.11 0.25 0.20 (0.24) (0.51)
- **2.4** 0.11 1.25 (2.20) 1.24 (0.20)
- **3.1** 2.1 2.15 (1.05) 3.00 (2.05)
- **1.90** (1.65) 1.20 0.20 (0.25) 0.35

Can you make these number sentences true?

a) __ __ . __ + __ __ . __ = 35.6

b) __ __ . __ + __ . __ = 35.6

c) __ __ . __ __ + __ __ . __ __ = 35.6

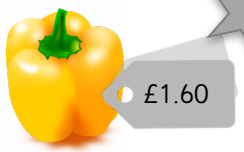
d) __ . __ __ + __ __ . __ __ = 35.6

e) __ __ . __ - __ __ . __ = 35.6

f) __ __ . __ - __ __ . __ = 35.6

Various different possibilities

1 box = 6 eggs



1 pepper = 10g

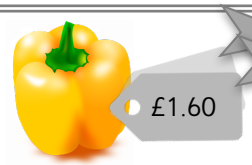
a) How much will you pay for 1 egg? £7.80/6 = £1.3

b) How much will you pay for 10 peppers? 10 x 1.60= £ 16

c) John bought a box of eggs and 2 peppers. He paid with a £20 note. How much change did he get? £ 11 . Show how you worked it out.

7.80 + (2 x 1.60) = 7.80 + 3.20 = 11

1 box = 6 eggs



1 pepper = 10g

a) John bought a half of a box of eggs. He paid with a £20 note. How many peppers can he buy with the change that he got? Show how you worked it out. 10

½ x 7.80 = 7.80 ÷ 2 = (7 ÷ 2) + (0.80 ÷ 2) = 3.5 + 0.4

½ box = £ 3.90

Change: 20 – 3.90 = £16.10

Peppers: 16.10 ÷ 1.60 = 161 ÷ 16 = 10 whole peppers

During the sports day, Jack jumped 2.67m. Jenny beat him because she jumped 0.25m further than Jack. Dwayne was the winner because he jumped 0.10m further than Jenny. Work out the distance Jenny and Dwayne jumped and complete the table.

Name	Distance (m)
1st Dwayne	2.99
2nd Jenny	2.89
3rd Jack	2.67

Jenny: 2.67 + 0.25 = 2.92

Dwayne: 2.92 + 0.10 = 3.02

Dwayne won the long jump competition with a 2.82m jump. Jenny jumped half that distance. Dexter jumped 0.5m further than Jenny and Max jumped 0.25m less but closer than Dexter. Work out the distance each of them jumped and complete the table.

Name	Distance (m)
1st Dwayne	2.82
2nd Dexter	1.91
3rd Max	1.66
4th Jenny	1.41

Jenny: 2.82/2 = 1.41

Dexter: 1.41 + 0.5 = 1.91

Max: 1.91 – 0.25 = 1.66

Circle two numbers with a difference of:

➢ **11**	1	3	-2	7	-4
➢ **6**	5	1	- 5	-1	2
➢ **7**	-2	- 3	4	-4	-2
➢ **5**	- 5	- 10	5	3	2

Circle two numbers with a difference of:

➢ **5**	1.2	- 2.3	2.7	-1.7	-1.3
➢ **10**	6.2	- 2.8	-3.8	5.2	-1.2
➢ **7**	-1.2	- 2.2	6.8	2.2	-8.2
➢ **9**	-.6.5	-2.5	6.5	-3.5	2.5

Almaty	0◦C	Halifax	1◦C	New York	4◦C
Amman	9◦C	Hanoi	14◦C	Oslo	- 2◦C
Amsterdam	3◦C	Harare	27◦C	Ottawa	- 7◦C
Anadyr	-16◦C	Havana	27◦C	Paris	5◦C
Anchorage	- 4◦C	Helsinki	-1◦C	Perth	15◦C
Ankara	-1 ◦C	Hong Kong	17◦C	Philadelphia	6◦C

a) What's the difference in temperature between Hong Kong and Paris? _____

b) What's the difference in temperature between New York and Ottawa? _____

c) Which city was 8 degrees warmer than Oslo? _____

d) How much colder was Ottawa than Helsinki? _____

e) How much warmer was Amsterdam than Oslo? _____

f) How much warmer was the warmest city than the coldest city? _____

g) The next day the temperature in Ankara rose by 6°C. What was the new temperature? _____

h) The next day the temperature in New York dropped by 6°C. What was the new temperature? _____

Circle two numbers with a difference of:

➢ **11**	1	3	-2	**7**	**-4**
➢ **6**	**5**	**1**	**- 5**	**-1**	2
➢ **7**	-2	**- 3**	**4**	-4	-2
➢ **5**	**- 5**	**- 10**	5	3	2

Circle two numbers with a difference of:

➢ **5**	1.2	**- 2.3**	**2.7**	-1.7	-1.3
➢ **10**	**6.2**	- 2.8	**-3.8**	5.2	-1.2
➢ **7**	**-1.2**	- 2.2	6.8	2.2	**-8.2**
➢ **9**	**- 6.5**	-2.5	6.5	-3.5	**2.5**

Almaty	0◦C	Halifax	1◦C	New York	4◦C
Amman	9◦C	Hanoi	14◦C	Oslo	- 2◦C
Amsterdam	3◦C	Harare	27◦C	Ottawa	- 7◦C
Anadyr	-16◦C	Havana	27◦C	Paris	5◦C
Anchorage	- 4◦C	Helsinki	-1◦C	Perth	15◦C
Ankara	-1 ◦C	Hong Kong	17◦C	Philadelphia	6◦C

a) What's the difference in temperature between Hong Kong and Paris? 12°C

b) What's the difference in temperature between New York and Ottawa? 11°C

c) Which city was 8 degrees warmer than Oslo? Philadelphia

d) How much colder was Ottawa than Helsinki? 6°C

e) How much warmer was Amsterdam than Oslo? 5°C

f) How much warmer was the warmest city than the coldest city? 43°C

g) The next day the temperature in Ankara rose by 6°C. What was the new temperature? 5°C

h) The next day the temperature in New York dropped by 6°C. What was the new temperature? -2 °C

Write the numbers half way between:

8 ☐ 12

-2 ☐ 2

-5 ☐ 7

-3 ☐ 11

Write the numbers half way between:

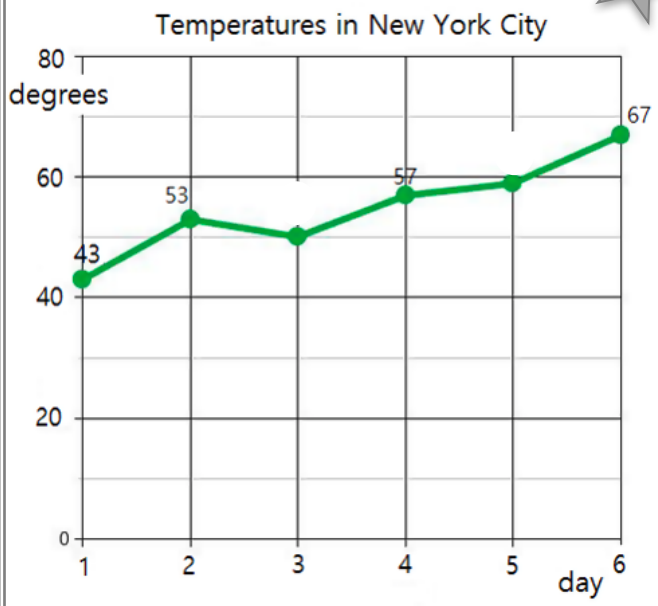
2.4 ☐ 4.4

1.8 ☐ 5.4

- 2.3 ☐ 3.7

-4 ☐ 6.6

The graph shows the temperature in New York over 6 days.



a) What was the temperature on the 3rd day? _____

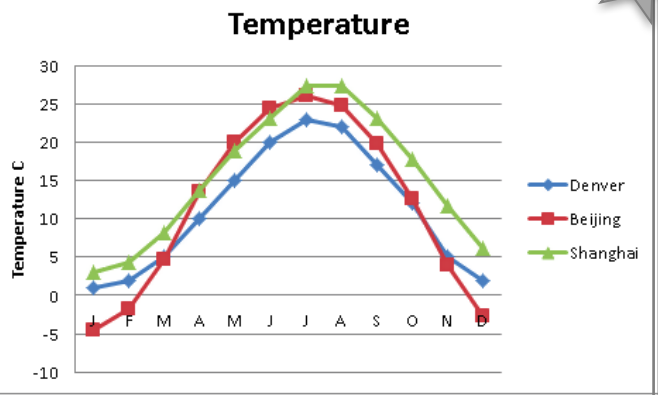
b) What was the temperature on the 5th day? _____

c) How many degrees did the temperature rise between the first and the last day? _____

d) Jack went away on the day when it was 53° and he got back when it was 67°. How many days was he away for? _____

e) The temperature dropped 11.5 degrees on the 7th day. What was the temperature om the 7th day? _____

The graph shows the temperature in 3 cities in 12 months.



a) What was the temperature in Beijing in March?_____

b) What was the temperature in Denver in June?_____

c) How many degrees did the temperature drop in Beijing between October and December? _____

d) What's the difference in temperature in December between Beijing and Shanghai? _____

e) Which city had the biggest temperature difference between the hottest and the coldest month?

_____

f) During which months was the temperature lower than 5°C in Beijing?

Write the numbers half way between:

8 — 10 — 12

-2 — 0 — 2

-5 — 1 — 7

-3 — 4 — 11

Write the numbers half way between:

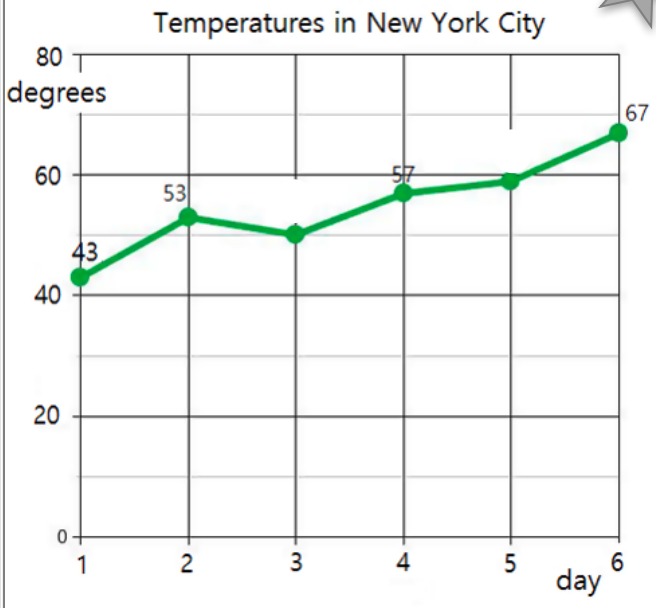
2.4 — 3.4 — 4.4

1.8 — 3.6 — 5.4

- 2.3 — 0.7 — 3.7

-4 — 1.3 — 6.6

The graph shows the temperature in New York over 6 days.



a) What was the temperature on the 3rd day? 50°

b) What was the temperature on the 5th day? 60°

c) How many degrees did the temperature rise between the first and the last day? 24

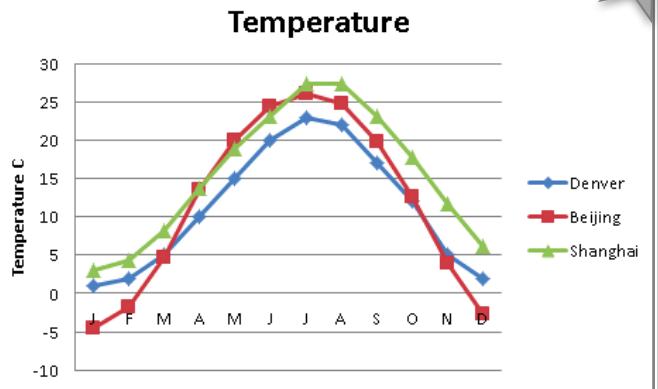
67 – 43 = 24

d) Jack went away on the day when it was 53° and he got back when it was 67°. How many days was he away for? 4

e) The temperature dropped 11.5 degrees on the 7th day. What was the temperature om the 7th day? 55.5°

67 – 11.5 = 55.5

The graph shows the temperature in 3 cities in 12 months.



a) What was the temperature in Beijing in March? 5°C

b) What was the temperature in Denver in June? 20°C

c) How many degrees did the temperature drop in Beijing between October and December? 15°C

d) What's the difference in temperature in December between Beijing and Shanghai? 7.5°C

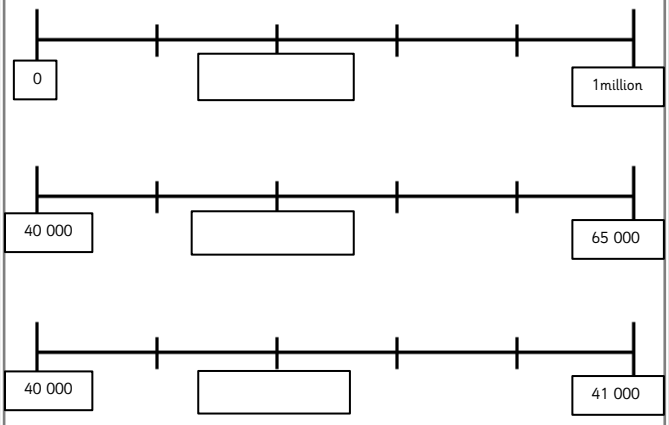
e) Which city had the biggest temperature difference between the hottest and the coldest month? Beijing

Beijing: 26 + (-5) = 31°C
Denver: 23°C
Shanghai: 27 – 3 = 24°C

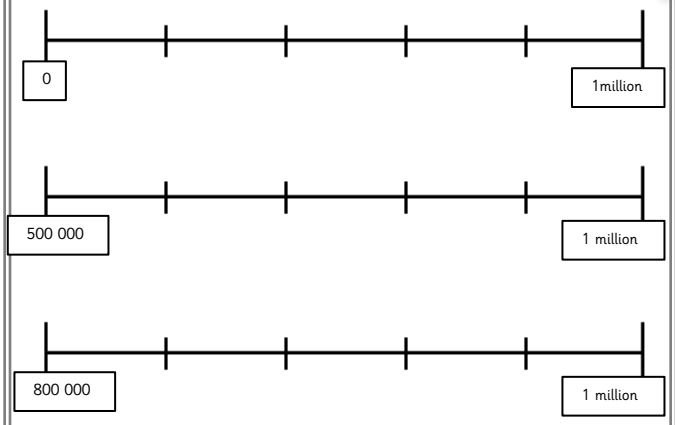
f) During which months was the temperature lower than 5°C in Beijing?

January, February, November, December

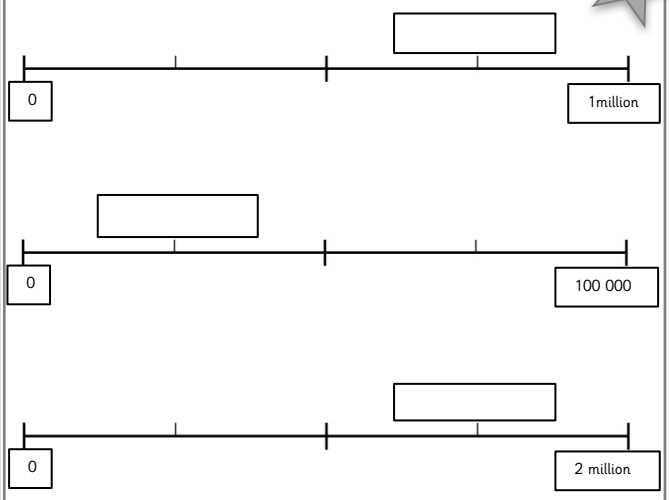
Write the missing number.



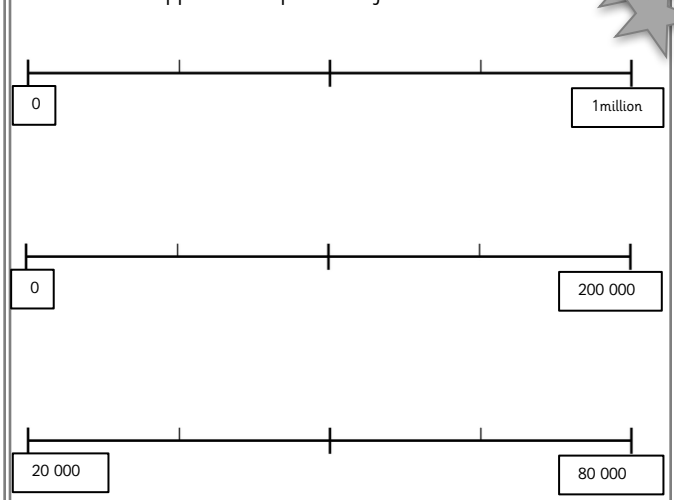
Estimate the approximate position of 850 000.



Write the missing number.



Estimate the approximate position of 50 000.



a) Two numbers have a difference of 1.45.
The bigger number is 3.4
What could the second number be? _____

b) Two numbers have a difference of 2.36.
The smaller number is 1.2
What could the second number be? _____

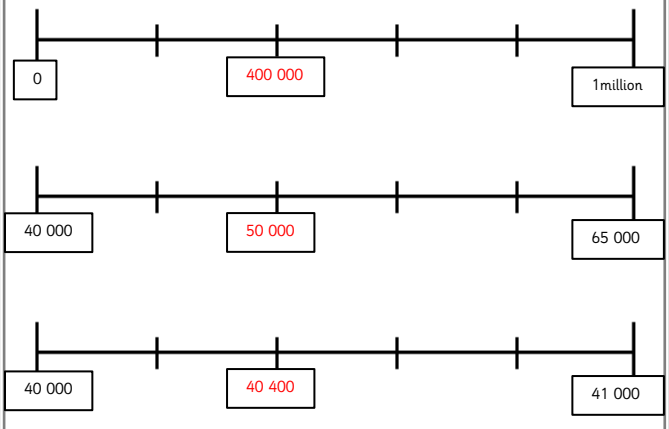
c) Two numbers have a difference of 1.1
They are both smaller than 6.
What could the numbers be? _____

a) Two numbers have a difference of 1.2.
They both add up to 4.
What could the numbers be? _____

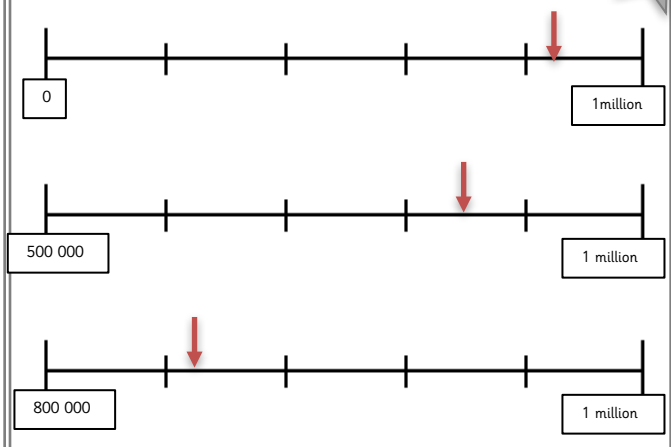
b) Two numbers have a difference of 2.46
They both add up to 8.
What could the numbers be? _____

c) Two numbers have a difference of 0.6
They both add up to 10.
What could the numbers be? _____

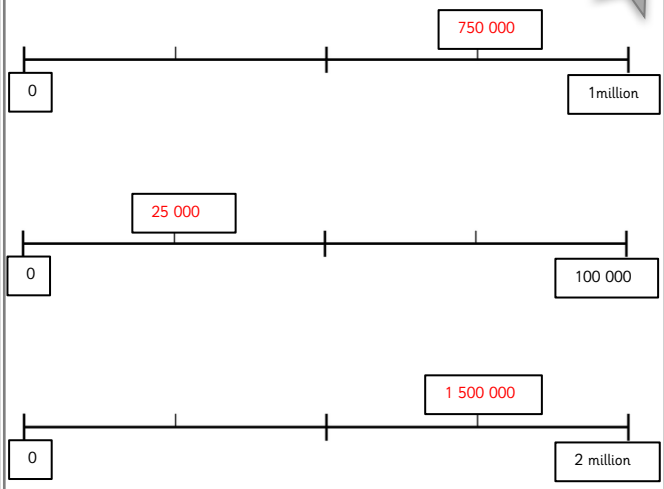
Write the missing number.



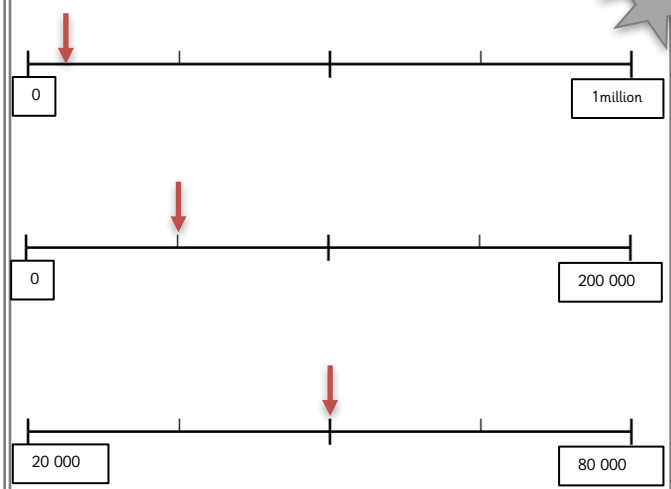
Estimate the approximate position of 850 000.



Write the missing number.



Estimate the approximate position of 50 000.



a) Two numbers have a difference of 1.45.
The bigger number is 3.4
What could the second number be? ___1.95____

3.4 – 1.45 = 1.95

b) Two numbers have a difference of 2.36.
The smaller number is 1.2
What could the second number be? ___3.56____

2.36 + 1.2 = 3.56

c) Two numbers have a difference of 1.1
They are both smaller than 6.
What could the numbers be? E.g. 2 and 3.1

X + y + 1.1 < 6 x + y < 4.9

a) Two numbers have a difference of 1.2.
They both add up to 4.
What could the numbers be? 1.4 and 2.6

x + (x + 1.2) = 4 2x = 2.8 x=1.4

b) Two numbers have a difference of 2.46
They both add up to 8.
What could the numbers be? 2.77 and 5.23

x + (x + 2.46) = 8 2x = 8- 2.46 = 5.54 x= 2.77

c) Two numbers have a difference of 0.6
They both add up to 10.
What could the numbers be? 4.7 and 5.3

x + (x + 0.6) = 10 2x = 9.4 x= 4.7

Simplify the following:

a) $2x + 4x =$

b) $2x + 3 + 7x =$

c) $15x - 5x - 7 =$

d) $2 \times 4y - 4 =$

e) $12y + 6y - 9x =$

f) $4x \div 2 \times 10 =$

g) $4 \times y \times x =$

True or false? If it's false, explain why.

a) $6 + x = 6x$ ☐

b) $x + 5 + 7x = 13x$ ☐

c) $15x - 5x = 10$ ☐

d) $4 + 4y - 4 = 4y$ ☐

e) $3n + 6y - 1n = 8ny$ ☐

f) $4q + 6 + 2 = 4q + 8$ ☐

g) $5 \times x \times y = 5xy$ ☐

If $q = 11$

What is:

a) $3q + 11 =$

b) $6q - 4q + 6 =$

c) $2 \times 3q + 7 =$

d) $q + y =$ If $y = 2q$

e) $3q - 5y =$ If $y = q + 9$

q and ***n*** represent whole **even numbers**.
q is 10 times bigger than ***n.***
Their sum is smaller than 100.
What could the value of ***q*** and ***n*** be?

q and ***n*** represent whole **even numbers**.
$q = \frac{1}{2}\ n$. $q > 20$
Their sum is smaller than 50.
What could the value of ***q*** and ***n*** be?

Work out the value of ***n***.

a) $3n + 4 = 100$ $n =$

b) $5n - 5 = 50$ $n =$

c) $4n + 4n + 10 = 90$ $n =$

d) $10n + 10 = 1000$ $n =$

Write the equation and find the solution (find ***n.***)

a) The sum of 5 times ***n*** and 7.3 is 57.3. $n =$

b) Two times the difference of 15 and n is 20,
15 is more than n. n =

c) 14 less than 6 times n is 34 $n =$

Simplify the following:

a) $2x + 4x = 6x$

b) $2x + 3 + 7x = 9x + 3$

c) $15x - 5x - 7 = 10x - 7$

d) $2 \times 4y - 4 = 8y - 4$

e) $12y + 6y - 9x = 18y - 9x$

f) $4x \div 2 \times 10 = 2x \times 10 = 20x$

g) $4 \times y \times x = 4yx$

True or false? If it's false, explain why.

a) $6 + x = 6x$ ☒

b) $x + 5 + 7x = 13x$ ☒

c) $15x - 5x = 10$ ☒

d) $4 + 4y - 4 = 4y$ ☑

e) $3n + 6y - 1n = 8ny$ ☒

f) $4q + 6 + 2 = 4q + 8$ ☑

g) $5 \times x \times y = 5xy$ ☑

If $q = 11$

What is

a) $3q + 11 = 44$

b) $6q - 4q + 6 = 66 - 44 + 6 = 28$

c) $2 \times 3q + 7 = 6q + 7 = 66 + 7 = 73$

d) $q + y = 11 + 22 = 33$ If $y = 2q$

e) $3q - 5y = 33 - 100 = 67$

If $y = q + 9 = 20$

q and ***n*** represent whole **even numbers**.
q is 10 times as big as ***n***.
Their sum is smaller than 100.
What could the value of ***n*** and ***q*** be?

2 and 20, 4 and 40, 6 and 60, 8 and 80

q and ***n*** represent whole **even numbers**.
$q = \frac{1}{2}\ n$. $n > 20$
Their sum is smaller than 50.
What could the value of ***q*** and ***n*** be?

24 and 12, 28 and 14, 32 and 16

Work out the value of ***n***.

a) $3n + 4 = 100$ $n = 32$

$3n = 96$ $n = 96/3$

b) $5n - 5 = 50$ $n = 11$

$5n = 55$ $n = 55/5$

c) $4n + 4n + 10 = 90$ $n = 10$

$8n = 80$ $n = 80/8$

d) $10n + 10 = 1000$ $n = 99$

Write the equation and find the solution (find ***n***.)

a) The sum of 5 times n and 7.3 is 57.3. $n = 10$

$5n + 7.3 = 57.3$ $5n = 50$ $n = 50/5$

b) Two times the difference of 15 and n is 20,
15 is more than n. $n = 5$

$2 \times (15 - n) = 20$ $15 - n = 10$ $n = 5$

c) 14 less than 6 times n is 34 $n = 8$

$6n - 14 = 34$ $6n = 48$ $n = 48/6$

True or false? If it's false explain why.

1. Perpendicular lines always intersect. ☐

2. Parallel lines sometime intersect. ☐

3. a//b mean that two lines are parallel. ☐

4. A square has two pairs of parallel lines and four pairs of perpendicular lines. ☐

5. a ⊥b means that two lines are perpendicular. ☐

True or false? If it's false explain why.

1. A triangle can never have perpendicular lines. ☐

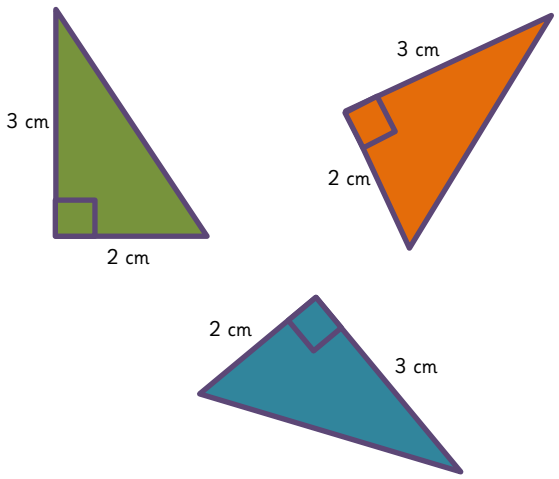
2. A hexagon has six pairs of parallel lines. ☐

3. A parallelogram can have perpendicular lines. ☐

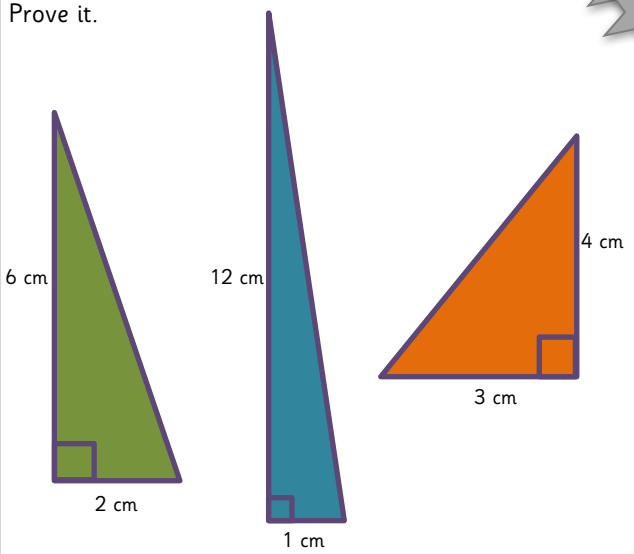
4. A equilateral triangle can never have perpendicular lines. ☐

5. a ⊥b c //d ☐

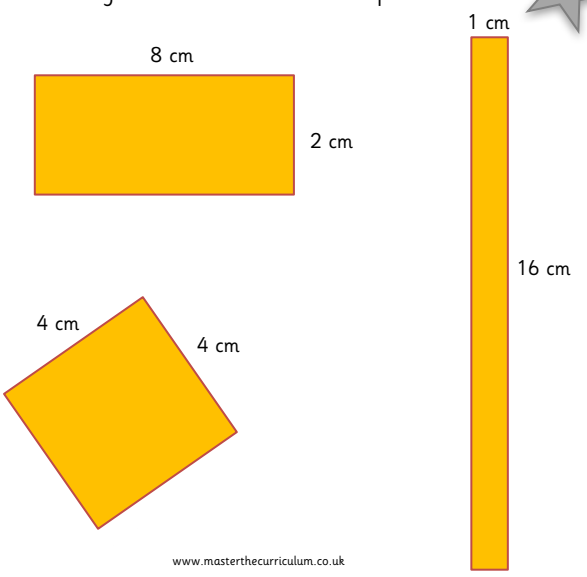
Do these triangles have the same area? Prove it.



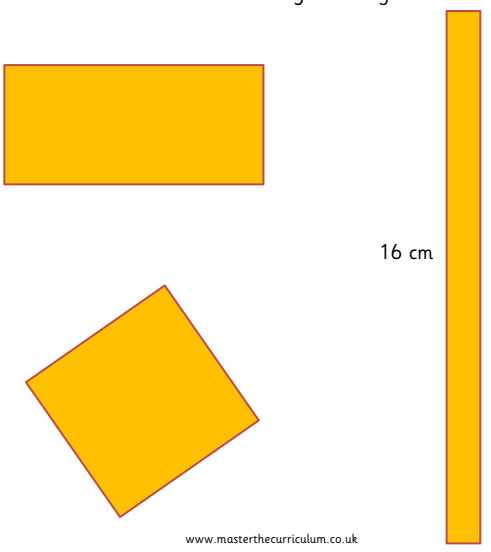
Do these triangles (not to scale) have the same area? Prove it.



Do these rectangles have the same area? Explain.



Write the possible lengths of sides so these rectangles have the same area. One has been given to you.



True or false? If it's false explain why.

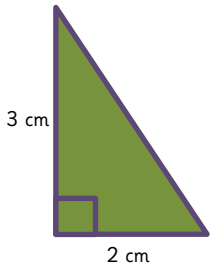
1. Perpendicular lines always intersect. ✓
2. Parallel lines sometime intersect. ✗
3. a//b mean that two lines are parallel. ✓
4. A square has two pairs of parallel lines and four pairs of perpendicular lines. ✓
5. a ⊥b means that two lines are perpendicular. ✓

True or false? If it's false explain why.

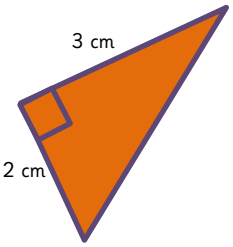
1. A triangle can never have perpendicular lines. ✗
2. A hexagon has six pairs of parallel lines. ✗
3. A parallelogram can have perpendicular lines. ✓
4. An equilateral triangle can never have perpendicular lines. ✓
5. a ⊥b c //d ✗

Do these triangles have the same area? Prove it.

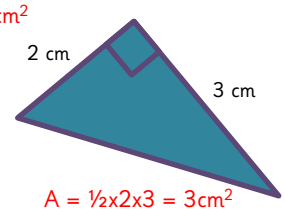
A = ½ b h Yes, all of these triangles have the same area.



A = ½x2x3 = 3cm²



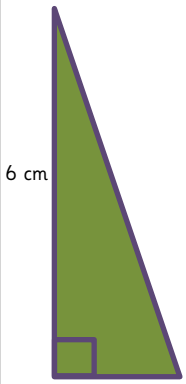
A = ½x2x3 = 3cm²



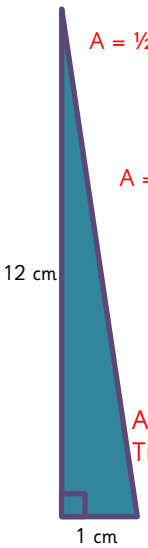
A = ½x2x3 = 3cm²

Do these triangles (not to scale) have the same area? Prove it.

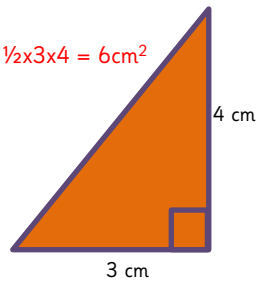
A = ½x2x6 = 6cm²



A = ½x1x12 = 6cm²

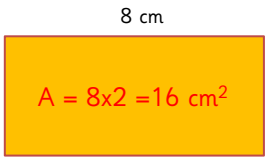


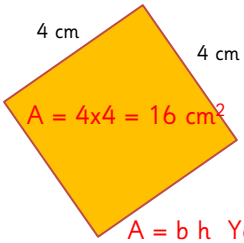
A = ½x3x4 = 6cm²

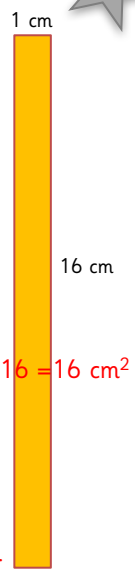


A = ½ b h Yes, all of these Triangles have the same area.

Do these rectangles have the same area? Explain.







A = b h Yes, all of these rectangles have the same area.

Write the possible lengths of sides so these rectangles have the same area. One has been given to you.