

FURTHER GO

English, Maths and
Foundation Learning




Barnet
Southgate
College
HeadStart

Number Part 1

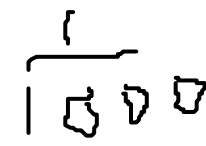


Contents

- Decimals
- Four Rules (+, -, \times and \div)
- Rounding and Estimation
- Negative numbers
- Powers
- BIDMAS



Decimals



BILLIONS			MILLIONS			THOUSANDS			ONES			DECIMALS			
100	10	1	100	10	1	100	10	1	100	10	1	tenths	hundredths	thousandths	ten-thousandths
					4	5	7	8	0	3	2				
						3	0	5	0	4	2	3	0	5	

4578032 ¢

00305042.305000

3 0 5 0 4 2 . 3 0 5



Four rules

- $46.308 - 9.249$

$$\begin{array}{r} 46.308 \\ - 9.249 \\ \hline 37.059 \end{array}$$

- 3.8×0.57

3

$$\begin{array}{r} 3.8 \\ \times 0.57 \\ \hline 266 \\ 1900 \\ \hline 2166 \end{array}$$

$$= 2.166$$



Division

- $3.374 \div 5$

$$\begin{array}{r} 0.6748 \\ 5 \overline{) 3.37400} \\ \underline{3} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \end{array}$$

- $38 \div 0.3$

$$20 \div 5 = 4$$

$$200 \div 50 = 4$$

$$380 \div 3$$

$$\begin{array}{r} 126.66 \\ 3 \overline{) 380.00} \\ \underline{3} \\ 0 \\ \underline{0} \\ 0 \\ \underline{0} \\ 0 \end{array}$$

$$126.6$$



Rounding (10,100,1000 etc.)

- Round 35487 to the nearest 10, 100, 1000 etc.

35490 35500 35000

- Round 24983.72 to the nearest 10, 100, 1000 etc.

24980 25000 25000



Rounding (decimal places d.p.)

- Round 3.8739 to 1, 2 and 3 d.p.'s

3.9 3.87 3.874

- Round 0.03962 to 1, 2 and 3 d.p.'s

0.0 0.04 0.040



Rounding (significant figures s.f.)

- Round 739842.7 to 1, 2 and 3 s.f.'s

700 000

74 0000

740 000

- Round 42.963 to 1, 2 and 3 s.f.'s

40

43

43.0

- Round 0.000007398 to 1, 2 and 3 s.f.'s

0.000007

0.0000074

0.00000740



Estimation

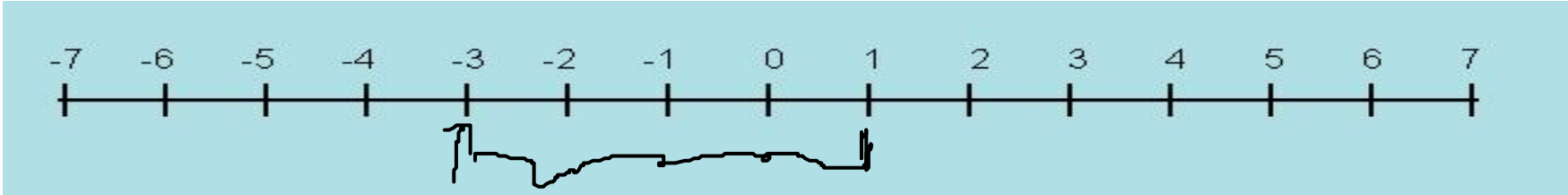
- I buy 18 pens for 73p each, estimate the cost.

$$20 \times 70 = 1400p = \pounds 14$$

- Estimate $\frac{13.6 \times 6.39}{0.52}$ $\frac{10 \times 6}{0.5} \approx \frac{60}{0.5} = 120$



Directed Numbers (positive and negative)



What is $3 - 4$? -1

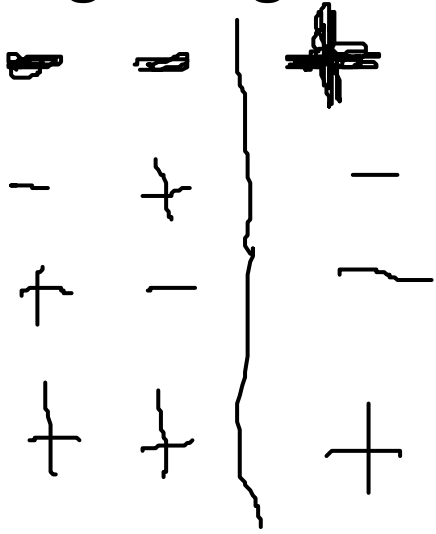
What is $-3 - 4$? -7

What is $3 - (-4)$? 7

What is $-3 - (+4)$? -7

What is $-3 - (-4)$? 1

Signs together



Directed Numbers

• What is $3 \times (-5)$ $= -15$

• $-8 \times (-3)$ $= 24$

• $-12 \div (-2)$ $= 6$

• $-5 + (-2) \times 3$ $= -5 - 6 = -11$



BIDMAS (order of operations)

• a) $3 + 22 - 1 = 24$

f) $10 + 22 \div 2 = 21$

• b) $(5 + 2)^2 \times 2 = 98$

g) $28 - 4 \div 2 = 26$

• c) $12 - 5 \times 2 = 2$

h) $3 \times 12 \div 4 = 9$

• d) $7 - (2 + 3)^2 = -18$

i) $(6 + 5) \times 3 = 33$

• e) $4 + 4 \times 5 = 24$

j) $(10 - 2) \times 5 = 40$





Basic Powers

- 5^2 $5 \times 5 = 25$

$$\sqrt{25} = 5 \text{ or } -5 \quad \pm 5$$

$$1, 4, 9, 16$$

- 5^3 $5 \times 5 \times 5 = 125$

$$\sqrt[3]{125} = 5$$

$$1, 8, 27, 64$$

- 5^4 $5 \times 5 \times 5 \times 5 = 625$