Number facts

Adding, subtracting, multiplying and dividing negative numbers

- Subtracting a positive number has the same effect as adding the negative number : **-⁺3 = +⁻3**
- Subtracting a negative number has the same effect as adding the positive number : **-⁻3 = +⁺3**

A good way of remembering how to deal with adding and subtracting positive and negative numbers is:
- When you have two signs that are the same next to each other, you replace them with a +
- When you have two signs that are different next to each other, you replace them with a -

Examples :   **⁺3 - ⁻4 = 3 + 4 = 7**   **⁻5 - ⁺3 = ⁻5 - 3 = ⁻8**

- When multiplying or dividing, two like signs give a +, two unlike signs give a -

Examples :   **⁺3 x ⁻4 = ⁻12**   **⁻6 ÷ ⁻3 = ⁺2**

Exercise 1 (no calculator allowed)
Work out these additions and subtractions.

(a) ⁻4 + ⁻8 = ...   (b) ⁻12 + ⁺10 = ...   (c) ⁺17 - ⁻23 = ...

(d) ⁺8 + ⁻4 = ...   (e) ⁺7 - ⁺3 = ...   (f) ⁻23 - ⁻15 = ...

Exercise 2 (no calculator allowed)
Work out these multiplications and divisions.

(a) -3 x +4 = ...   (b) +5 x -8 = ...   (c) -3 x -7 = ...

(d) +7.19 x 1,000=.........   (e) -100 ÷ +4=..........   (f) -7,850 ÷ -10=......

BIDMAS is a made-up word to help you remember the order of operations:

1 Brackets   2 Indices   3 Divide   4 Multiply   5 Add   6 Subtract

When the operations are the same, you do them in the order they appear.

Exercise 3
Use BIDMAS to help you find the value of these expressions.

(a) -3 x (-4 + 5) =	(b) +3 x 4² =	(c) -2 + 10 ÷ -5 =
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BIDMAS	BIDMAS	BIDMAS

d) -2 - 3 x -4 =	(e) -5 - -2 + -10 =	(f) - 20 + -2 -10 =
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.... =	.... =	.... =
....	....	....
(g) -7 x -3 - 4 x -5 =	(h) +20 ÷ (-2 x +10)=	(i) +5 x (-2)² =
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.... =	.... =	.... =
....	....	....
(j) (-3)² – +5² =	(k) (+4 – -3)² =	(l) -7 – -3 x -4 + -5 x -2=
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.... =	.... =	.... =
....	....	....
(m) -12 ÷ -4 + -3 ÷ +6 =	(n) -2x(-3)² – +5 x+4² =	(o) +2 x (-4 + -3 x -2)² =
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....	....	....
(p) (9-5-2)²÷(60÷3÷4)²=	(q) -2 x (-10 - -4 - -2)² =	(r) -5 x 3² + (-5x3)²=
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