**Replace the Dots No 1**

can be replaced by **+** or **-** or or 

For example: there are eight different replacements for 12

|  |  |  |  |
| --- | --- | --- | --- |
| **+** 1 **+** 2 **=** 3 | **+** 1 **-** 2 = -1 | **+** 1http://www.madras.fife.sch.uk/maths/multsign.gif2 = 2 | **+** 1http://www.madras.fife.sch.uk/maths/divsign.gif2 =http://www.madras.fife.sch.uk/maths/half.gif  |
| **-** 1 **+** 2 = 1 | **-** 1 **-** 2 = -3 | **-** 1http://www.madras.fife.sch.uk/maths/multsign.gif2 = -2 | **-** 1http://www.madras.fife.sch.uk/maths/divsign.gif2 = -http://www.madras.fife.sch.uk/maths/half.gif  |

**1** Fill in the replacements for that give that give the required answer:

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 0 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 1 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 2 |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 4 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 5 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 6 |

**2** These must be different from your answers to **1** :

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 0 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 5 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 6 |

**3** Can you find replacements that give these negative answers?

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -7 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -6 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -5 |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -4 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -2 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -1 |

**4** Find a different way to do these:

|  |  |
| --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -5 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -6 |

**5** Now try these harder examples:

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 12/3 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 1/3 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 2/3 |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 31/2 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 11/2 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = 1/6 |

**6** Now some negative fractions:

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = - 21/2 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = - 1/3 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = -12/3 |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = - 2/3 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = - 31/2 | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = - 1/6 |

**7** There are three answers that you have not made so far. Can you find them?

|  |  |  |
| --- | --- | --- |
| http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = **?** | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = **?** | http://www.madras.fife.sch.uk/maths/largedot.gif1http://www.madras.fife.sch.uk/maths/largedot.gif2http://www.madras.fife.sch.uk/maths/largedot.gif3 = **?** |