Increasing and decreasing by a percentage

Write out a table of multipliers for increasing and decreasing by a given % starting with 1.0 = 100%

Find the following multiplier

10% increase	9% decrease
Half of the original	12.5% increase
20% reduction	45% of the original
Double	8.9% increase
0.1% increase	Half again
19.2% reduction	55% reduction
12% of the original	80% increase

Increase £18 by 12%

Find 38% of 912

Decrease £78 by 15%

An item costs £33. It is decreased by 12% and then increased by 5%. What is the cost? Is this the same as decreasing by 7%?

Decrease 112kg by 38%

Increase 555 by 11%

A pile of coal is decreased by 48%. It started weighing 50kg. What does it weigh now?

Decrease 30 by 14% 3 times. What could you use as a multiplier to do it on one calculation?

Johns wages are increased by 27.5% He originally earned £200 a week. (i) Without using a calculator write down if his wages have gone over £250. (ii) Find the exact amount he is now paid.

Increase £10 by 50% until it becomes greater than £10000. How did you do it?

Decrease -112 by 38%

Increase 30kg by 23.12%

Decrease 36 by 20% and then increase it by 20%. Does it end up being 36? If not why not?

What is the 500% of ½

Increase 8 by 8% then 80%. Can you do it in one calculation?

If you start with £100 and constantly decrease it by 10% how many times would you have to reduce it before you have less than 1p? Show your workings

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