

Compensation

Mental Math Strategy

When to use this strategy: Use this strategy when (adding or multiplying and) you can change one number to a convenient value.

How to use this strategy: To use this strategy change one number to a convenient value (usually by making it bigger--adding), do the operation, and then **compensate** (usually by subtracting) to get the answer.

Examples: $29 \times 3 = 30 \times 3 - \text{"compensation"} = 90 - 1 \times 3 = 90 - 3 = 87$

$$18u + 28u = (20+28 - \text{"compensation"})u = (48-2)u = 46u$$

$$(19w)(6w) = ((20)(6) - \text{"compensation"})w^2 = (120 - 6)w^2 = 114w^2$$

Use this (new) strategy on the following:	
1.) Simplify $19x + 43x$	2.) Simplify $45m^3 + 28m^3$
3.) Simplify $(19w)(7w)$	4.) Simplify $(3)(39w)$

Use any strategy you know on the following:	
5.) Convert 19 feet to inches.	6.) 640 people are split into 5 teams, how many people are on each team?
7.) At a garage sale three items cost \$2.50, \$4.37, and \$3.50. Find the total cost.	8.) Ricardo the elephant ate 223 kg, 211 kg, 220 kg, and 201 kg over a 4 day period. How many kg did Ricardo consume?