Estimating Strategies for Sums and Differences

Strategy	Example
Round each number to the nearest multiple of 10, 100, 1000 etc.	693 + 458 is about 700 + 500 = 1200 693 - 458 is about 690 - 460 = 230
Round each number to another "round" number	693 + 458 is about 700 + 450 = 1150 693 - 458 is about 700 - 450 = 250
Round one number but not the other	693 + 458 is about 700 + 458 = 1158
When adding, round both numbers, one up and one down	693 + 458 is about 700 + 450 = 1150
When subtracting, round both numbers up or both numbers down	693 - 458 is about 700 - 500 = 200 693 - 458 is about 650 - 450 = 200
Estimate within a range	428 + 397 is between 700 (400 + 300) and 900 (500 + 400)
Estimate in terms of money	385 + 245 is about 3 loonies, 3 quarters + 2 loonies, 2 quarters, which is 6 loonies, l quarter, or 625
Estimate by using compatible numbers, which are often not "round" at all	867 - 471 is about 867 - 467 = 400

Estimating Strategies for Products and Quotients

Strategy	Example
Round one or both numbers to the nearest multiple of 10, 100, 1000 etc.	25 X 52 is about 25 X 50 = 1250 39 X 31 is about 40 X 30 = 1200 642 + 32 is about 600 + 30 = 20
Round numbers such that familiar multiplication and division facts can be used.	574 + 9 is about 560 + 8 = 70 574 + 9 is about 540 + 9 = 60
When multiplying, round one factor up and the other down.	65 X I5 is about 60 X 20 = 1200
When dividing, round both numbers up or both numbers down.	337 + 8 is about 360 + 9 = 40 337 + 8 is about 280 + 7 = 40
Round numbers to the nearest multiple of 10, 100, 1000, or 25 to be able to multiply or divide by 25	389 X 27 is about 400 X 25 = 10 000 612 + 27 is about 600 + 25 = 24

Source: Making Math Meaningful to Canadian Students, K-8, Marian Small