

Estimating in Multiplication

If you don't need an exact result, you can estimate. To estimate a multiplication, round some or all of the factors so that it will be easy to multiply *mentally*.

There are no hard and fast rules as to how exactly you should round. The idea is round some of the numbers so that your new rounded numbers are easy to multiply in your head.

Estimate 8×189 .

189 can be rounded to 200.
The estimated product is
 $8 \times 200 = 1,600$.

Estimate 42×78 .

$42 \approx 40$ and $78 \approx 80$.
The estimated product is
 $40 \times 80 = 3,200$.

Estimate $21 \times \$4.56$.

Round the numbers to 20 and \$4.50.
Multiply in parts:
 $20 \times \$4 = \80 and $20 \times 50\text{¢} = 1000\text{¢} = \10 .
Then add: $\$80 + \$10 = \$90$.

1. Estimate by rounding one or both factors. Don't round both if you can calculate in your head just by rounding one factor!

a. 5×69 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	b. 11×58 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	c. 119×8 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$
d. 27×52 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	e. $7 \times \$4.15$ $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	f. $8 \times \$11.79$ $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$
g. $25 \times \$42.50$ $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	h. 9×17 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$	i. 63×897 $\approx \underline{\quad} \times \underline{\quad} = \underline{\quad}$

2. Estimate the cost. Round one or both numbers so you can multiply in your head!

a. 24 chairs at \$44.95 per chair \approx	b. 512 Popsicles at 19¢ each
c. 210 meters of wire at \$1.49 per meter	d. Six tennis balls that cost \$3.37 each and two rackets that cost \$11.90 each.