

Estimating in Multiplication

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

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 $21 \times \$4.52$.

First round the numbers to 20 and \$4.50.
Then, since $2 \times \$4.50$ is nine dollars,
 $20 \times \$4.50$ is ten times that, or \$90.

1. Estimate the results by rounding one or both factors. Don't round both numbers if you can multiply in your head just by rounding one factor.

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

2. Estimate the total cost. Round one or both numbers so that you can multiply in your head. Write a number sentence to show your multiplication with rounded numbers.

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