MATHEMATICS 4

Modified In-School Off-School Approach Modules (MISOSA)

Distance Education for Elementary Schools

SELF-INSTRUCTIONAL MATERIALS

ESTIMATING PRODUCTS

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by the Learning Resource Management and Development System (LRMDS),
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in Selected Provinces in the Visayas (STRIVE).

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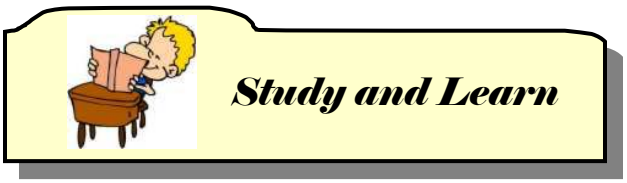
ESTIMATING PRODUCTS

Objective: Estimate the product of two factors with 5-or more digits by 2- to 3-digit number.

Round the number to the highest place value. Write your answer on your paper.

a. 67
b. 485
c. 476
d. 321
e. 1 578
f. 1 421
g. 56 678
h. 30 578
i. 215 678
j. 434 261

Check your answer using the key to correction. If your score is 8 - 10, you may now proceed to this module. If you get 7 correct answers or below, review first the past lessons.



Read the problem carefully.

> The headline of the newspaper read, “ABOUT 2 000 000 PEOPLE ATTENDED THE CLOSING OF A RELIGIOUS ACTIVITY.” How many people really attended the closing ceremony?

You need to learn how to make good estimates because there are many instances in our daily life when an estimate and not an exact answer is the appropriate answer to give.

Read the problem below and do your best to follow through the discussion.

If a poultry farm can produce 15 785 eggs per week, about how many eggs can it produce in 29 weeks?

The phrase "about how many" tells us to get the estimated product.

S T E P S	Round off each factor to its greatest place value position. 15 785 ---- 20 000 X 29 ---- X 30	Multiply the rounded factors. 20 000 X 30 600 000	Find the exact product. 15 785 X 29 142 065 315 70 457 765

The farm can produce about 600 000 eggs in 29 weeks. Is the estimate good? No, because it is far from the actual product.

Let's try 15 790 15 785 rounded to the nearest tens
X 30 x 29 rounded to the nearest tens
473 700

Now which estimate is closer? *The factors, which are rounded off to the nearest tens have the closer estimated product.*

What are the two ways that we use to estimate the product? *First, we rounded the factors to the highest place value. Second, we rounded them to the nearest tens which is the highest place value of the multiplier.*

A. Round each factor to the greatest place value then multiply.

a. 53 254 rounds to _____
x 158 rounds to _____

b. 153 254 rounds to _____
x 26 rounds to _____

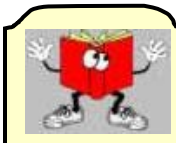
c. 86 541 rounds to _____
x 38 rounds to _____

d. 247 254 rounds to _____
x 69 rounds to _____

e. 5 133 234 rounds to _____
x 218 rounds to _____

B. Read and solve.

Nineteen big cities around the world pledged to support reforestation program. If all of them were able to plant 18 465 seedlings each, about how many seedlings were planted in all? (Round first the factors to the nearest tens then multiply.)



Wrap Up

To estimate products, round the factors to its greatest place value or to a specified place value then multiply.

On Your Own

A. Estimate the product to the nearest hundreds.

a. 59 561 b. 321 578 c. 1 267 434
x 58 x 147 x 234

d. 621 541
x 678

e. 254 324
x 729

B. Round each numbers to the highest place value then multiply.

a. 32 578
x 26

b. 89 564
x 58

c. 187 464
x 246

d. 1 898 464
x 31

e. 12 578 464
x 329

Check your answer with the answer key.

If you get 8 to 10 correct answers, you have mastered the skills in this module and you may proceed to the next.
If you get 5 to 7 correct answers, review the processes you missed.
If you get 4 correct answers or below, repeat the whole process.