

Luna's Space Adventure

Grade 5 • Estimating with all four operations • 5.3A

Name _____

Date _____



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Round, then add or subtract Round each number to the nearest 100.

$$742 - 367 \approx \boxed{} - \boxed{} = \boxed{}$$

$$684 + 137 \approx \boxed{} + \boxed{} = \boxed{}$$

$$654 - 379 \approx \boxed{} - \boxed{} = \boxed{}$$

$$530 - 195 \approx \boxed{} - \boxed{} = \boxed{}$$

Estimate products Round each number to its first place, then multiply.

$$914 \times 7 \approx \boxed{} \times \boxed{} = \boxed{}$$

$$893 \times 3 \approx \boxed{} \times \boxed{} = \boxed{}$$

$$41 \times 34 \approx \boxed{} \times \boxed{} = \boxed{}$$

$$445 \times 9 \approx \boxed{} \times \boxed{} = \boxed{}$$

Estimate quotients Change the first number to a nearby one the divisor goes into.

$$1,809 \div 6 \approx \boxed{} \div \boxed{} = \boxed{}$$

$$1,497 \div 3 \approx \boxed{} \div \boxed{} = \boxed{}$$

$$2,381 \div 6 \approx \boxed{} \div \boxed{} = \boxed{}$$

$$3,073 \div 5 \approx \boxed{} \div \boxed{} = \boxed{}$$

Estimate with decimals Round each decimal to the nearest whole number.

$$34.1 - 8.3 \approx \boxed{} - \boxed{} = \boxed{}$$

$$7.7 \times 3.7 \approx \boxed{} \times \boxed{} = \boxed{}$$

$$52.4 - 3.1 \approx \boxed{} - \boxed{} = \boxed{}$$

$$48.4 + 2.8 \approx \boxed{} + \boxed{} = \boxed{}$$

Does it make sense? Estimate first, then circle yes or no.

Hugo says $74 \times 28 = 207$. Is that reasonable?

yes no

Ava says $549 \div 9 = 610$. Is that reasonable?

yes no

Dev says $304 \div 4 = 76$. Is that reasonable?

yes no



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ANSWER KEY



Astronaut Luna is exploring a far-off corner of space. Solve each problem to help Luna's mission go smoothly!

Round, then add or subtract Round each number to the nearest 100.

$$742 - 367 \approx \boxed{700} - \boxed{400} = \boxed{300}$$

$$684 + 137 \approx \boxed{700} + \boxed{100} = \boxed{800}$$

$$654 - 379 \approx \boxed{700} - \boxed{400} = \boxed{300}$$

$$530 - 195 \approx \boxed{500} - \boxed{200} = \boxed{300}$$

Estimate products Round each number to its first place, then multiply.

$$914 \times 7 \approx \boxed{900} \times \boxed{7} = \boxed{6300}$$

$$893 \times 3 \approx \boxed{900} \times \boxed{3} = \boxed{2700}$$

$$41 \times 34 \approx \boxed{40} \times \boxed{30} = \boxed{1200}$$

$$445 \times 9 \approx \boxed{400} \times \boxed{9} = \boxed{3600}$$

Estimate quotients Change the first number to a nearby one the divisor goes into.

$$1,809 \div 6 \approx \boxed{1800} \div \boxed{6} = \boxed{300}$$

$$1,497 \div 3 \approx \boxed{1500} \div \boxed{3} = \boxed{500}$$

$$2,381 \div 6 \approx \boxed{2400} \div \boxed{6} = \boxed{400}$$

$$3,073 \div 5 \approx \boxed{3000} \div \boxed{5} = \boxed{600}$$

Estimate with decimals Round each decimal to the nearest whole number.

$$34.1 - 8.3 \approx \boxed{34} - \boxed{8} = \boxed{26}$$

$$7.7 \times 3.7 \approx \boxed{8} \times \boxed{4} = \boxed{32}$$

$$52.4 - 3.1 \approx \boxed{52} - \boxed{3} = \boxed{49}$$

$$48.4 + 2.8 \approx \boxed{48} + \boxed{3} = \boxed{51}$$

Does it make sense? Estimate first, then circle yes or no.

Hugo says $74 \times 28 = 207$. Is that reasonable?

yes ☒ no

Ava says $549 \div 9 = 610$. Is that reasonable?

yes ☒ no

Dev says $304 \div 4 = 76$. Is that reasonable?

☒ yes no



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GUIDE

1 What this sheet practises

Estimating sums, differences, products and quotients by rounding or using nearby easy numbers, and using an estimate to tell whether an answer makes sense.

2 A problem from the sheet, worked out

Estimate quotients Change the first number to a nearby one the divisor goes into.

$$1,809 \div 6 \approx \boxed{1800} \div \boxed{6} = \boxed{300}$$

$$1,497 \div 3 \approx \boxed{1500} \div \boxed{3} = \boxed{500}$$

$$2,381 \div 6 \approx \boxed{2400} \div \boxed{6} = \boxed{400}$$

$$3,073 \div 5 \approx \boxed{3000} \div \boxed{5} = \boxed{600}$$

How: Round to numbers that are easy to work with, then do the math in your head. For division, change the first number to one the divisor goes into: $4,215 \div 7$ is about $4,200 \div 7 = 600$.

3 Words to know

estimate a close answer found with easier numbers

round change a number to a nearby ten, hundred or thousand

compatible numbers numbers easy to divide in your head

reasonable makes sense, close to the estimate

4 Watch for

- Rounding one number and not the other.
- Rounding $4,215 \div 7$ to $4,000 \div 7$, which doesn't divide evenly.
- Accepting an answer ten times too big because the digits look right.

5 Where it fits

BEFORE

4.OA.A.3

Solve multi-step story problems, including ones with remainders.

THIS SHEET

5.3A

Estimate answers to problems with any of the four operations.

NEXT

5.NF.A.2

Solve fraction story problems and check answers with benchmark fractions.

6 Helping at home

At the store, estimate the total of three items before checkout, then compare with the receipt.

