LESSON MAKER PRO

Operation Mission Control

Solve, estimate, and check whole-number operations.

GRADE 5 · 5.CE.1.b.iii

5.CE.1.b.iii "Represent, solve, and justify solutions to single-step and multistep contextual problems by applying strategies (e.g., estimation, properties of addition and multiplication) and algorithms, including the standard algorithm..."

NAME _____ DATE _____

PLAN, SOLVE, CHECK

For a multistep problem, decide which operation happens first and write a number sentence for each step. Estimate to see whether your answer is reasonable, then use a standard algorithm. Check division by multiplying the quotient by the divisor and adding any remainder.

WORKED EXAMPLE

3,456 / 12

1. Estimate: 3,600 / 12 = 300, so the quotient should be near 300.
2. 12 goes into 34 two times. Write 2, subtract 24, and bring down 5.
3. 12 goes into 105 eight times. Subtract 96, and bring down 6.
4. 12 goes into 96 eight times. The quotient is 288.

Answer: 288

PRACTICE 6 problems

1 4,728 + 1,956 = ___

ANSWER _____

2 9,003 - 4,587 = ___

ANSWER _____

3 326 x 17 = ___

ANSWER _____

4 5,184 / 16 = ___

ANSWER _____

5 2,975 / 8 = ___

ANSWER _____

6 8,640 / 27 = ___

ANSWER _____

APPLY IT Show your work

1 For a library book drive, 26 classes collect 148 books each. The books are packed into boxes that hold 32 books each. How many full boxes can be packed, and how many books will be left over?

WORK SPACE

ANSWER _____

2 A student council has 2,450 tickets for a game night. It puts 178 tickets at each of 9 game stations. The remaining tickets are shared equally among 14 prize bags. How many tickets go in each prize bag, and how many tickets are left?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A makers club builds 37 prize boxes with 128 craft pieces in each box. It uses 1,275 pieces for a display, then shares the rest equally among 29 tables. How many pieces does each table get, and how many are left? Show an estimate and equations for your steps.

WORK SPACE AND ANSWER

ANSWER KEY

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	4,728 + 1,956 = ___	**6,684**
2	9,003 - 4,587 = ___	**4,416**
3	326 x 17 = ___	**5,542**
4	5,184 / 16 = ___	**324**
5	2,975 / 8 = ___	**371 R7**
6	8,640 / 27 = ___	**320**

PART 2 · APPLY IT

1. **120 full boxes, 8 books left over** Multiply 26 x 148 = 3,848 books. Then divide 3,848 / 32 = 120 R8.
2. **60 tickets in each prize bag, 8 tickets left over** First find the tickets at the stations: 178 x 9 = 1,602. Then 2,450 - 1,602 = 848, and 848 / 14 = 60 R8.

CHALLENGE

Estimate: about 4,700 - 1,300 = 3,400, and 3,400 / 29 is about 117. 37 x 128 = 4,736; 4,736 - 1,275 = 3,461; 3,461 / 29 = 119 R10. Each table gets 119 pieces, with 10 left.

Accept equivalent remainder forms, such as 371 remainder 7 or 371 R7. For word problems and the challenge, accept correct equations or standard-algorithm work that supports the final answer.