

1.2 Planning with KNOWS and Hidden Questions

Chapter 1: Basic Problem Solving and Mathematical Modeling

Name: _____

Date: _____

Class/Period: _____

Problem 1.14 Directions:

For each problem, write the hidden question or questions before solving.

A theater has 14 rows with 18 seats in each row. If 37 seats are empty, how many people are seated?

Problem 1.17 Directions:

For each problem, write the hidden question or questions before solving.

A camp has 7 buses carrying 42 students each. The students form teams of 14. How many teams are formed?

Problem 1.15 Directions:

For each problem, write the hidden question or questions before solving.

Eight classrooms collect 32 cans each. The cans are packed equally into 16 boxes. How many cans go in each box?

Problem 1.18 Directions:

For each problem, write the hidden question or questions before solving.

A store has 18 cases of juice with 24 bottles in each case. It gives 96 bottles to a charity. How many bottles remain?

Problem 1.16 Directions:

For each problem, write the hidden question or questions before solving.

A bakery makes 12 trays of 25 muffins. It sells 174 muffins. How many muffins remain?

Problem 1.19 Directions:

For each problem, write the hidden question or questions before solving.

A farmer gathers 425 eggs on Monday and 379 on Tuesday. The eggs are packed into cartons of 12. How many full cartons can be filled?

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Problem 1.20 Directions:

For each problem, write the hidden question or questions before solving.

A school buys 20 packs of markers with 16 markers in each pack. After 48 markers are used, the rest are shared equally among 8 classes. How many markers does each class receive?

Problem 1.23 Directions:

For each problem, write the hidden question or questions before solving.

A library has 28 shelves with 35 books on each shelf. It donates 140 books and divides the rest equally among 7 rooms. How many books go in each room?

Problem 1.21 Directions:

For each problem, write the hidden question or questions before solving.

A museum sells 135 child tickets and 87 adult tickets in the morning. In the afternoon it sells 96 more tickets. How many tickets are sold that day?

Problem 1.24 Directions:

For each problem, write the hidden question or questions before solving.

A club sells 46 tickets on Friday and 58 tickets on Saturday. Each ticket includes 3 game tokens. How many tokens are needed?

Problem 1.22 Directions:

For each problem, write the hidden question or questions before solving.

A warehouse receives 11 pallets with 40 boxes on each pallet. It ships 165 boxes. The remaining boxes are placed equally on 5 shelves. How many boxes go on each shelf?

Problem 1.25 Directions:

For each problem, write the hidden question or questions before solving.

A garden has 9 rows of 27 plants. After 54 plants are moved, the remaining plants are split equally between 7 sections. How many plants are in each section?

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Problem 1.26 Directions:

For each problem, write the hidden question or questions before solving.

Ten classrooms participate in a food drive. Six classrooms collect 48 cans each, and four classrooms collect 36 cans each. The cans are packed into boxes that hold 24 cans.

Part A. State the hidden questions that must be answered before the number of boxes can be found.

Part B. Create a model using a diagram, table, or sequence of equations. Use the model to determine the number of full boxes.

Part C. A student writes $10 \times 48 \div 24$. Explain why this model does not represent the situation correctly.