Mixing Problems

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Question:

If Mrs. Gould has **7 boys** and **5 girls** in her class, how many questions do her students answer each class, on average?

Mixing Problems

Suppose we change it up a bit...

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Question:

If Mrs. Gould has **7 boys** in her class, how **girls** does she need so that each student answers an average of 3 questions per class?

Mixing Problems

Suppose we change it up a bit more...

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Question:

If there are a total of 23 students in Mrs. Gould's class, and each student answers 1 question per day on average, how many **girls** are in Mrs. Gould's class? How many **boys** are in her class?

Mixing Problems

Let's change it up one more time...

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Question:

If there are a total of 30 students in Mrs. Gould's class, and 96 questions are answered each day, how many **girls** are in Mrs. Gould's class? How many **boys** are in her class?

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Type 1

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- **Given**: How many of each component you're mixing.
- **Find**: The **weighted average** of the components.

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Type 2

- **Given**: The **weight** of each component you're mixing
- **Given**: How many of **one** of the components.
- **Given**: The desired **weighted average**.
- **Find**: How many of the other component are needed to obtain the desired **weighted average**.

➪ Our second example, was a type 2 mixing problem.

Mixing Problems

Our mixing problems come in three different types:

Type 3

- **Given**: The **weight** of each component you're mixing
- **Given**: The **total number** of components being mixed.
- **Given**: The **weighted average** or the **weighted sum** of the components.
- **Find**: How many of each component.

⇨ Our third and fourth example, were type 3 mixing problems. In the third example we were given the **weighted average** and in the fourth we were given the **weighted sum**.