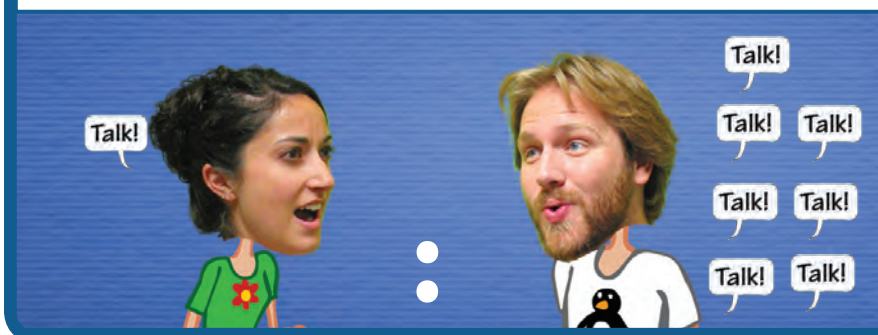# Bad Date
Learner Guide

Watch the animation, *Bad Date*, and complete these activities. The animation and an instructor guide are available on iTunes U (search "Math Snacks") and at **mathsnacks.org**
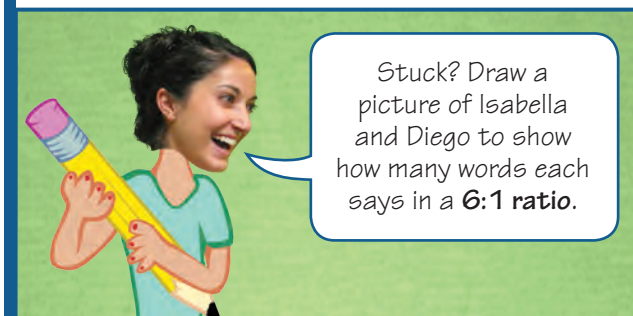

A ratio is a comparison of two numbers.

In the Bad Date animation, Isabella spoke **one** word for every **seven** words Mike spoke.

The **ratio** of her words to his words is one to seven or **1:7**. We generally separate the two numbers in the ratio with a colon (:).

On her second date, Isabella spoke 36 words, and Diego spoke only 6, for a **6:1 ratio**. In other words, she spoke six times as many words.

Stuck? Draw a picture of Isabella and Diego to show how many words each says in a **6:1 ratio**.

Here are examples of 6:1 ratios.

Isabella's words	Diego's Words
36 words	6 words
18 words	3 words
6 words	1 word

1. Use the ratio 6:1 to find the answers.

A. If Isabella spoke **12 words**, how many words did Diego speak?

12 words	

B. If Diego spoke **20 words**, how many words did Isabella speak?

	20 words

C. What if she spoke **60 words**?

60 words	

D. What if he spoke **32 words**?

	32 words

2. Find the ratio 5:7!

Brother's TV Time	Sister's TV Time
5	7

A. If the brother watched **10 hours** of TV over the weekend, how much TV did the sister watch?

B. If the brother watched **1 hour** of TV, how much TV did the sister watch?

C. If the sister watched **10.5 hours**, how much TV did the brother watch?

> My brother watches **five** hours of TV for every **seven** hours that I watch.

> It's a **ratio** of 5 to 7 **(5:7)**.

There are lots of situations in which **1:1 ratios** are desirable – or even required. For example, in a basketball game, each team has 5 players on the court, so the ratio of players is 5:5 or 1:1. Likewise, in a football game, each team fields 11 players, so the ratio is 1:1.

3. Can you think of three other situations in which a 1:1 ratio is desirable?

A.

B.

C.

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4. Can you think of three situations in which a 1:1 ratio is not desirable or possible?

A.

B.

C.

There are lots of situations in which **1:1 ratios** are not desirable or possible. For example, in a bus, there could be 1 bus driver for 44 students, so the ratio of bus drivers to students would be **1:44**.

At the end of the last date, the ratio of words was **57:56**.

57 : 56
Isabella : Harvey

5. Why did Harvey say "bread"?

A. If Harvey had not said "bread," would Isabella still consider it a one-to-one ratio? Explain.

B. What other ratios would be acceptable for Isabella to consider the date successful? Explain.

NM STATE Learning Games Lab