

## DOREEN AND TIM ARE GOING STEADY!



**T**im asked Doreen to go steady. Doreen said she would under one condition: that Tim not tell anyone for at least a week.

"I won't tell anyone if you won't," Tim said.

Doreen frowned. She *had* to tell Babs, her best friend. And Tom, her other best friend, ought to know too. "What if I promise only to tell two people?" she asked Tim.

"Fine with me," Tim said. He'd tell only two people himself—his best friends Anita and Luis.

"What if Anita and Luis each tell two people?" Doreen asked.

"I don't know," Tim said. "What if Babs and Tom do the same thing?"

Maybe we better sit and think about this."

1. *If after an hour Tim and Doreen each tell their best friends, how many people will know they are going steady?*

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2. *If it takes an hour for each friend to tell two other friends the news, how long will it take before 30 people know about Doreen and Tim? (Assume that each person who learns the secret tells it to two different friends and only two friends, and that it takes exactly an hour for the secrets to be told.)*

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3. *At this rate, how long will it take the whole school—510 students—to learn what happened?*

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"This will never work," Tim said. "You're right," Doreen said. "It won't work. But I've got an idea. The way it was before, we each told two friends for a total of four. Why don't we cut it down to three friends? We'll make a list—together—of three people we want to tell."

"Great," Tim said. "And each of them can only tell three other friends."

4. *Using this new arrangement, will it take more or less time before 40 people know the secret? (Assume that each person who learns the secret tells it to three different friends and only three friends, and that it takes exactly an hour for the secrets to be told.)*

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5. *How many hours will it take the whole school to know the secret?*

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6. *Suppose Tim and Doreen each told four friends the secret, but each friend could only tell one other friend. Would the secret travel more quickly or less quickly than before?*

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7. *How long would it take before 50 people know the secret?*

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### EPILOGUE

Tim and Doreen never could agree on which and how many people to tell. They argued about it until Spanish class started. Someone overheard the

argument and started the rumor that they were "not getting along."

In almost no time, "not getting along" changed to "breaking up."

When Doreen heard this she was furious. She waited for Tim outside Gym.

"How dare you tell everyone we broke up when we never even started going together in the first place," she said.

"How dare you blame me when I had nothing to do with it," Tim said.

Doreen looked at him closely. "Are you telling the truth?"

"Of course I am," Tim said.

"I can't believe it," said Doreen.

"Someone must have started a rumor about us."

The two of them started to laugh.

When they had finished laughing, Tim became serious. He asked Doreen to go steady with him for the second time. Doreen said she would, but only if they didn't tell anyone at all. At least for a while.

"Fine with me," Tim said.

And that was how it ended—happily. Except for the fact that someone spotted them laughing and smiling together. By the next morning a new rumor had already started.

But that's another story.