## Doorman's Code

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You're a spy and you have to get into a building where there's a secret meeting. But, the doorman won't let you in unless you give him a secret code.

## Materials Needed

$\square$ some mathematical pattern-finding logic

## Instructions

1. To figure out the secret code, you watch three men give the doorman the secret code.
2. The first man walks up to the door and the doorman says 10 . The first man answers 5 and he gets in.
3. The second man walks up to the door and the doorman says 8 . The second man answers 4 and he gets in.
4. The third man walks up to the door and the doorman says 4. The third man answers 2 and he gets in.
5. What's the code?
6. Here's another one for you to figure out. The first man walks up to the door and the doorman says 7 . The first man answers 8 and he gets in.
7. The second man walks up to the door and the doorman says 6 . The second man answers 6 and he gets in.
8. The third man walks up to the door and the doorman says 10 . The third man answers 14 and he gets in.
9. What's the code?

Ready for the solutions to the puzzles above? In the first one, whatever the doorman says, you have to divide by 2 to get the answer. In the second one, you subtract 3 from whatever the doorman says and then you multiply by 2 ! It's really fun to make up codes and have your friends try to figure them out.

