

### G.CO.C.9: Logic Tables

- 1 At a school costume party, seven girls wore masks and nine boys did not. If there were 15 boys at the party and 20 students did not wear masks, what was the total number of students at the party?
  - 1) 30
  - 2) 33
  - 3) 35
  - 4) 42
  
- 2 Frank, George, and Hernando are a plumber, a cabinet maker, and an electrician, though not necessarily in that order. Each can do all work appropriate to his own field, but no work in other fields. Frank was not able to install a new electric line in his home. Hernando was not able to make cabinets. George is also a building contractor who hired one of the other people to do his electrical work. Which statement must be true?
  - 1) Hernando is an electrician.
  - 2) George is a cabinet maker.
  - 3) Frank is a plumber.
  - 4) Frank is an electrician.
  
- 3 John, Dan, Karen, and Beth went to a costume ball. They chose to go as Anthony and Cleopatra, and Romeo and Juliet. John got the costumes for Romeo and Cleopatra, but not his own costume. Dan saw the costumes for Juliet and himself. Karen went as Anthony. Beth drove two of her friends, who were dressed as Anthony and Cleopatra, to the ball. What costume did John wear?

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### Answer Section

1 ANS: 2

	BOYS	GIRLS	TOTAL
MASKED	6	7	13
UNMASKED	9	11	20
TOTAL	15	18	33

REF: 060110a

2 ANS: 1

	P	CM	E
FRANK			no
GEORGE			no
HERNANDO		no	

Since neither Frank nor George is an electrician, Hernando must be the electrician.

REF: 010214a

3 ANS:

Juliet.

	Anthony	Cleo	Romeo	Juliet
John		no	no	
Dan				no
Karen	yes			
Beth	no	no		

	Anthony	Cleo	Romeo	Juliet
John	no	no	no	yes
Dan	no			no
Karen	yes			
Beth	no	no		

Since Karen went as Anthony, no one else went as Anthony, including John. Since John got the costumes for Romeo and Cleopatra, but not his own costume, John did not go as Romeo or Cleopatra. The only remaining costume for John is the Juliet costume.

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