

The Chinese Remainder Theorem:

Illustration: Think of any number between 0 and 60 (non inclusive). Now find the remainders: r_3 when your number is divided by 3, r_4 when your number is divided by 4, and r_5 when your number is divided by 5. Calculate: $40r_3 + 45r_4 + 36r_5$ and find the remainder of this number when divided by 60. This should be your original number.

In groups in class:

Try the above one as an example with each group member thinking of the number and telling you the remainders so the rest of you can “guess” it.

The numbers 40, 45 and 36 are “magic”. What makes them so?

Find three relatively prime numbers a , b , and c and construct your own illustration using them by finding the appropriate “magic” numbers.

	relatively prime numbers	associated magic numbers
a		
b		
c		

Homework: Try one of the illustrations above to amaze family members or friends and record their reactions. Write a narrative of the experience.