1. When the positive integer x is divided by 4, is the remainder equal to 3?
(1) When x/3 is divided by 2, the remainder is 1.
(2) x is divisible by 5.

2. In 2003 Acme Computer priced its computers five times higher than its printers. What is the ratio of its gross revenue for computers and printers respectively in the year 2003?
(1) In the first half of 2003 it sold computers and printers in the ratio of 3:2, respectively, and in the second half in the ratio of 2:1.
(2) It sold each computer for $1000.

3. Last Tuesday a trucker paid $155.76, including 10 percent state and federal taxes, for diesel fuel. What was the price per gallon for the fuel if the taxes are excluded?
(1) The trucker paid $0.118 per gallon in state and federal taxes on the fuel last Tuesday.
(2) The trucker purchased 120 gallons of the fuel last Tuesday.

4. What is the remainder when the positive integer x is divided by 8?
(1) When x is divided by 12, the remainder is 5.
(2) When x is divided by 18, the remainder is 11.

5. Al, Pablo, and Marsha shared the driving on a 1500 mile trip, which of the three drove the greatest distance on the trip?
(1) Al drove 1 hour longer than Pablo but at an average of 5 miles per hour slower than Pablo.
(2) Marsha drove 9 hours and averaged 50 miles per hour

6. How many perfect squares are less than the integer d?
(1) 23 < d < 33
(2) 27 < d < 37

7. The integers m and p are such that 2 is less than m and m is less than p. Also, m is not a factor of p. If r is the remainder when p is divided by m, is r > 1.
(1) The greatest common factor of m and p is 2.
(2) The least common multiple of m and p is 30.

8. A scientist is studying bacteria whose cell population doubles at constant intervals, at which times each cell in the population divides simultaneously. Four hours from now, immediately after the population doubles, the scientist will destroy the entire sample. How many cells will the population contain when the bacteria is destroyed?
(1) Since the population divided two hours ago, the population has quadrupled, increasing by 3,750 cells.
(2) The population will double to 40,000 cells with one hour remaining until the scientist destroys the sample.

9. Is x^2 equal to xy?
(1) $x^2 - y^2 = (x+5)(y-5)$
(2) x=y

10. A number of oranges are to be distributed evenly among a number of baskets. Each basket will contain at least one orange. If there are 20 oranges to be distributed, what is the number of oranges per basket?
(1) If the number of baskets were halved and all other conditions remained the same, there would be twice as many oranges in every remaining basket.
(2) If the number of baskets were doubled, it would no longer be possible to place at least one orange in every basket.

11. If p is a prime number greater than 2, what is the value of p?
(1) There are a total of 100 prime numbers between 1 and p+1
(2) There are a total of p prime numbers between 1 and 3912.

12. If x is a positive integer, what is the least common multiple of x, 6, and 9?
(1) The LCM of x and 6 is 30.
(2) The LCM of x and 9 is 45.