Cryptology

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1 Problem 1

1.1 a)

5

1.2 b)

111

1.3 c)

6

1.4 d)

1

1.5 e)

33

1.6 f)

2

2 Problem 2

a

3 Problem 3

a

4 Problem 4

1

5 Problem 5

1 or 2 (1 if a is odd, 2 if a is even)

6 Problem 6

6.1 a)

2

6.2 b)

3

6.3 c)

7

7 Problem 7

40, 15, and 12

8 Problem 8

If you take four primes and multiply them together with the combinations of 3 numbers of the 4-number-set (2*3*5, 2*5*7, 2*3*7, 3*5*7), you get a set where all of the set is coprime, but any 3 are NOT coprime.
S = {30, 42, 70, 105}