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CS 135 HW 6

I pledge my honor that I have abided by the Stevens Honor System.

Section 4.1

6. Because a|c and b|d, the laws of multiplication state that a * b | c * d which can be written as ab|cd.

22.
- a. -111 div 99 = -1

   -111 mod 99 = -12
- b. -9999 div 101 = -99

   -9999 mod 101 = 0
- c. 10299 div 999 = 10

   10299 mod 999 = 309

Section 4.2

2.
- a. 1 0100 0001
- b. 11 1111 1111

4.
- a. 27

Section 4.3

4.
- a. 3 * 13
- b. 3^4

14. 1, 5, 7, and 11 are relatively prime to 12

16.
- a. Yes
- b. No, gcd(14, 21) returns 7
- c. Yes

32.
- c. gcd(123, 277)

   277=123*2 +31

   123=31*3 + 30

   31=30*1 +1

Section 4.5

2.

        a. 58
        b. 60
        c. 52
        d. 3
6. 3, 6, 4, 3, …

Section 4.6

2. 18 19 14 15 15 14 11 11 20 19 8 14 13
        a. 22 23 18 19 19 18 15 15 24 23 12 18 17
           WXST TSPPYXMSR
        c. 16 17 12 13 13 12 9 9 18 17 6 12 11
           QRMN NMJJSRGML