

HOMEWORK ASSIGNMENT 2
AMAT326 (S09)

Due: Feb 10 (Tuesday)

- (1) Show that of any three consecutive integers, exactly one is divisible by 3.
- (2) Show that for any number n and $n + 1$ are coprime.
- (3) Show that if $(a, b) = 1$ and $c|a$, then $(c, b) = 1$.
- (4) Show that if $b = aq + r$, then $(b, a) = (a, r)$.
- (5) Using Euclid's algorithm, find the greatest common divisor of 295 and 595.
- (6) Prove that if $(a, b) = d$, then $(a/d, b/d) = 1$.
- (7) You take a 12 quart jug and a 17 quart jug to a stream and want to bring back 8 quarts of water. How do you do that?

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