

Quiz 5A, MTH 2010 - No Calculators

Dr. Graham-Squire, Fall 2014

Name: _____

1. (3 points) P is a prime number that divides 252. Which of the following must be true? Explain your reasoning and/or show your work.

(A) P divides 28

(B) P divides 42

(C) P divides 63

(D) P divides 72

2. (2 points) What is the 100th digit to the right of the decimal place in the decimal expansion of the fraction $\frac{317}{999}$? Explain your reasoning and/or show your work.

3. (3 points) Exactly one of the numbers below is a prime number. Which one is it? Explain your reasoning and/or show your work.

(A) 417

(B) 415

(C) 412

(D) 409

(E) 407

4. (2 points) The prime factorization of 1239 is $3 \times 7 \times 59$. How many factors does 1239 have, including 1 and itself? Explain your reasoning and/or show your work.