

EXAM 1 - MATH 111

Wednesday, September 25, 2002

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Read each problem very carefully before starting to solve it. Each question is worth 2 points. It is necessary to show your work. Correct answers without explanations are worth 0 points.

GOOD LUCK!!

1. Find the slope of the line with equation $5x + 3y = 21$.
2. Find the equation of the line that is perpendicular to the line $y = 7x + 2002$ and passes through the point $(1, \frac{6}{7})$.
3. The cost C in terms of the number of items x produced is given by $C(x) = 3x + 10$ and the revenue by $R(x) = 5x$. Find the revenue, when the company breaks even.
4. The supply S of an item in terms of the price p is given by $S(p) = -p^2 + 300$ and the demand D by $D(p) = 20p$. Determine the equilibrium price and the equilibrium supply.
5. Solve the inequality $|x - 5| - 2 \leq 6$.
6. Find the domain of $f(x) = \sqrt{\frac{x+2}{x-5}}$.