QUIZ 2 - MATH 112 YOUR NAME:

Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Find the domain of the function $f(x) = \frac{x^2 - 6x + 7}{x^3 - 7x^2 - 30x}$.

2. Compute the difference quotient of $f(x) = 2x^2 - 7x$ at x (and simplify).

3. Graph the piece-wise defined function

$$f(x) = \begin{cases} x+2, & \text{if } x < 2\\ x^2 - 8x + 15, & \text{if } x \ge 2 \end{cases}$$

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Please label **all** important points.