

YOUR NAME: _____

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

1. [2 points] Consider the interval shown below. Write the same interval in:



- (a) set notation (please, be precise).
- (b) interval notation.
2. [5 points] Find an equation for the line ℓ that passes through the point $(5, 17)$ and is perpendicular to the line ℓ' passing through the points $(7, 2)$ and $(16, 5)$.

3. [3 points] Simplify the following expression (write it as a single power of x).

$$\frac{\sqrt[3]{x^5}}{(x^{-2})(\sqrt{x^3})} =$$