Lesson 17: Modeling with Inequalities

Cool Down: Movies on a Hard Drive

Elena is trying to figure out how many movies she can download to her hard drive. The hard drive is supposed to hold 500 gigabytes of data, but 58 gigabytes are already taken up by other files. Each movie is 8 gigabytes. Elena wrote the inequality $8x + 58 \geq 500$ and solved it to find the solution $x \geq 55.25$.

1. Explain how you know Elena made a mistake based on her solution.

2. Fix Elena's inequality and explain what each part of the inequality means.

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