



Power Mad!

Powers of numbers behave in surprising ways. Can you find convincing arguments that explain why all the statements below are true?

- a) $2^1+3^1, 2^3+3^3, 2^5+3^5, \dots, 2^{99}+3^{99}$ are all multiples of 5.
- b) $199+299+399+499$ is a multiple of 5.
- c) $1x+2x+3x+4x+5x$ is a multiple of 5 when x is odd.

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