

What can we do with computers?

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What can be
computed
efficiently?

Hardware

Software

Hardware

faster computers

Software

Hardware

faster computers

Software

clever algorithms

**Fundamental
limitations?**

Hardware

Software

Hardware

laws of physics

Software

Hardware

laws of physics

Software

laws of mathematics

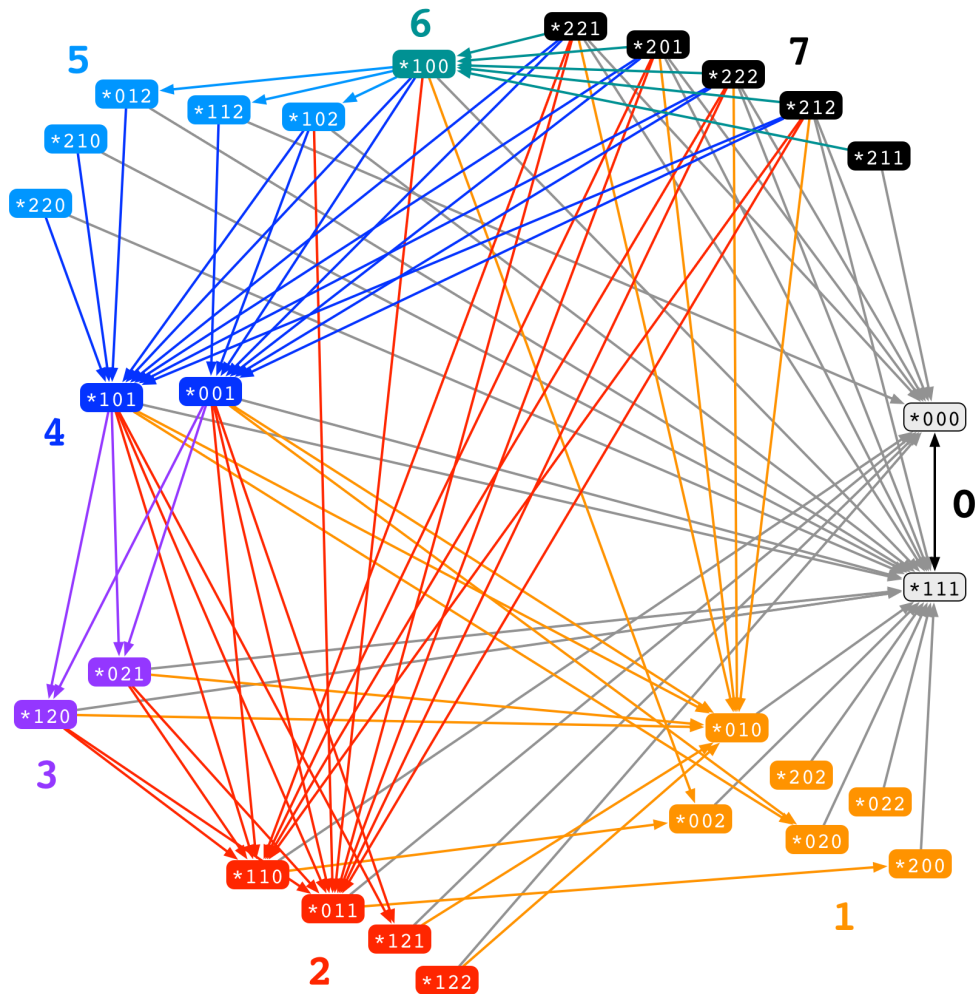
**Computationally
easy problems**



**Computationally
hard problems**

Using
computers
to design
algorithms?

Computer-designed distributed algorithms



What can be
computed
efficiently?