

# Mathematical Habits

Attend to detail and precision.

*Strive for accuracy and excellence. Take care & pride in your work.*

Make and use models.

*Use math to represent the world.*

Name quantities and figures.

*If you can't name something, you can't talk about it.*

Bound & estimate.

*How low is too low? How high is too high?*

*What's a reasonable guess?*

Seek elegance; remove needless detail.

*All other things being equal, simpler is better.*

Use rules & patterns to be productively lazy.

*Only solve the same problem twice if you're practicing.*

Prove facts deductively.

*Use logic. Identify causes & effects. Look for flaws in reasoning.*

Measure & quantify: apply numbers to shapes.

*Turn geometry problems into algebraic & numeric ones.*

*Turn algebra problems into geometric ones.*