Mathematical Habits of Mind
Subgroup D Report

Negative Habits of Mind

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Brainstorming: Negative HoM
Spontaneous or impulsive disposition or tendency to act
(We’re only focused here on negative instances)

Example 1 \((x + 3)(x - 4) = 0\)
Student multiplies first

• Targeting the familiar
• Programmed to react to certain recognized patterns
• Situated with respect to certain instructional environments
• Spontaneous disposition may be limiting to or block cognitive growth

Research considerations
• How can we identify spontaneous dispositions (vs automated correct responses)?
• What situations/tasks elicit a spontaneous disposition?
• Is a spontaneous disposition visually influenced? (What about blind people?)
• Can eye tracking collect useful information?

Example 2
The figure shows a right triangle NQR and a rectangle PQRS: NQ = 5cm, QR = 12cm, and RS = 3cm. When you are asked to find the length PM, how likely are you going to begin by using the Pythagorean theorem to find the length NR?