Exploding Dots

Experience 1: The Machines

Access videos of all *Exploding Dots* lessons at: http://gdaymath.com/courses/exploding-dots/

Handout B: *Other Machines*

Here are some more questions you might, or might not, choose to ponder.

1. a) Show that the code for four in a 1 ← 3 machine is 11.

b) Show that the code for thirteen in a 1 ← 3 machine is 111.

c) Show that the code for twenty in a 1 ← 3 machine is 202.

2. Could a number have code 2041 in a 1 ← 3 machine? If so, would the code be "stable"?

3. Which number has code 1022 in a 1 ← 3 machine?

We can keep going!

4. What do you think rule is for a 1 ← 4 machine?

What is the 1 ← 4 code for the number thirteen?

5. What is the 1 ← 5 code for the number thirteen?

6. What is the 1 ← 9 code for the number thirteen?

7. What is the 1 ← 5 code for the number twelve?

8. What is the 1 ← 9 code for the number twenty?

9. a) What is the 1 ← 10 code for the number thirteen?

b) What is the 1 ← 10 code for the number thirty-seven?

c) What is the 1 ← 10 code for the number 5846?

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