**Playing with dot machines**

What is the 1🡨4 machine code for 29?

What would the code 100 mean in a 12 machine? 13 machine? 14 machine? Do you notice any patterns?

Can you represent 25 in a 12 Machine? A 13 machine? A 14 machine? What patterns do you notice?

Make up your own questions, and test them on friends!

**What’s going on here?**

What are these machines doing?

What is the relationship between any dot in a 19 machine and a dot that is one box to its left?

What makes 110 machines different from other machines?

Does the order of the explosions matter?

Is there an easy way to find the code for the number 324 (324 dots)

in a 12 machine? a 16 machine? a 1x machine?

**What else can these machines do?**

Can you convert the code 110 from a 13 machine to a 16 code? a 18 code?

What happens if you add two 110 machines together, like this:



What numbers are you adding together?

How does this compare to our traditional addition algorithm for adding two numbers?

Can other operations be done with 110 machines?

What does a 1x machine do?

What does a 23 machine do?

Could a 110 machine be extended to include decimal values?