

# Number machines

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This task is about completing number pairs and writing equations for 'number machines'.



This is a machine that changes numbers. If you put 3 into the machine 16 comes out. If you put 2 into the machine 11 comes out. If you put 8 into the machine 41 comes out.

a) Complete the following number pairs using the rule for the number machine.

(2, 11) (3, 16) (4, \_\_\_) (6, \_\_\_) (8, 41) (9, \_\_\_)

b) Write an equation to show the rule for the number machine. Use  $n$  to represent the number going in to the machine.

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c) Machine B produces different numbers. Complete the following number pairs to show the pattern for Machine B.

(2, 12) (3, 19) (4, \_\_\_) (6, \_\_\_) (8, 54) (9, \_\_\_)

d) Write an equation to show the rule for Machine B. Use  $n$  to represent the number going in to the machine.

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e) Machine C also produces different numbers. Complete the following number pairs to show the pattern for Machine C.

(2, 7) (3, 12) (4, \_\_\_) (6, \_\_\_) (8, 37) (9, \_\_\_)

f) Write an equation to show the rule for Machine C. Use  $n$  to represent the number going in to the machine.

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