Multiples of 2

Add as in model:

Where does the 2 of 12 come from?
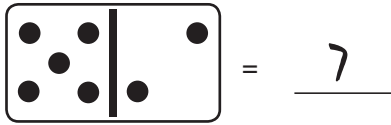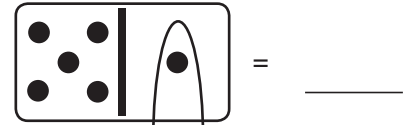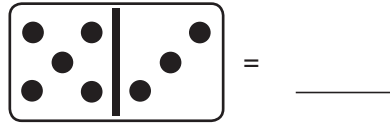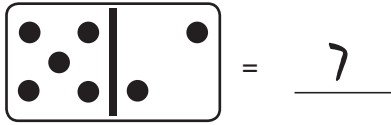
▦ = 7	▦ = ___	▦ = ___
▦ = 7	▦ = ___	▦ = ___
10 + 4 = 14	___ + ___ = ___	___ + ___ = ___

▦ = ___	▦ = ___	▦ = ___
▦ = ___	▦ = ___	▦ = ___
___ + ___ = ___	___ + ___ = ___	___ + ___ = ___

▦ = ___	▦ = ___	▦ = ___
▦ = ___	▦ = ___	▦ = ___
___ + ___ = ___	___ + ___ = ___	___ + ___ = ___

▦ = ___	▦ = ___	▦ = ___
▦ = ___	▦ = ___	▦ = ___
___ + ___ = ___	___ + ___ = ___	___ + ___ = ___
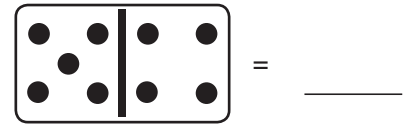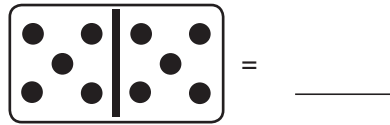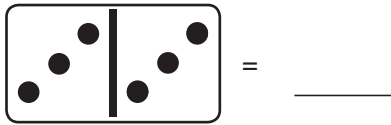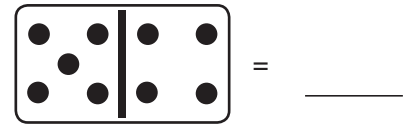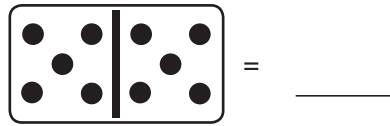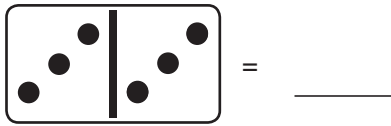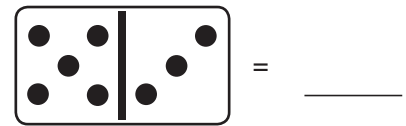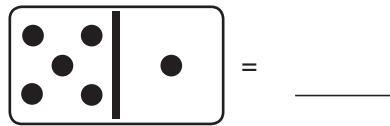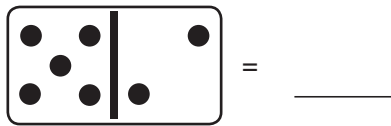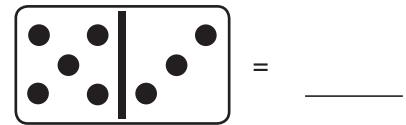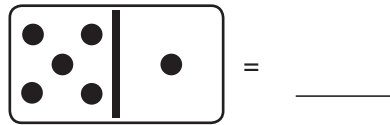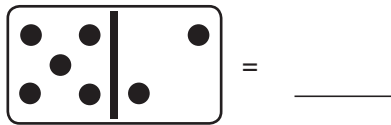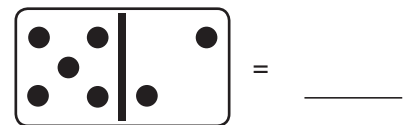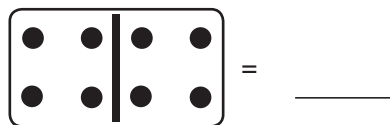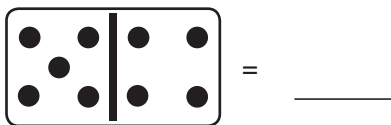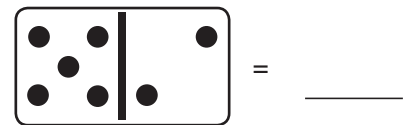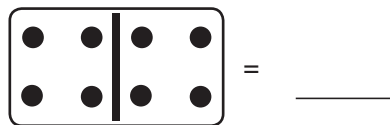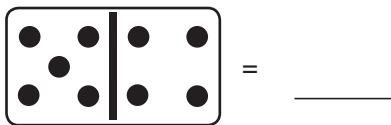
423: The digits are 4, 2, and 3.   The SUM of the digits is 4 + 2 + 3 = 9

For all multiples of 9: The sum of the digits is always 9 (or a multiple of 9).

We know that 423 is a multiple of 9 because 4 + 2 + 3 = _____ .

111,111,111 is a multiple of 9 because the sum of the digits is _____ .

8 + 1 = 9.   So __*81*__ and __*18*__ are multiples of 9.

6 + 3 = _____   So _____ and _____ are multiples of 9.

7 + 2 = _____   So _____ and _____ are multiples of 9.

4 + 5 = _____   So _____ and _____ are multiples of 9.

Write the unit's digit to make two-digit multiples of 9.

8*1*__   7__   6__   5__   4__   3__

2__   1__   9__   7__   4__   6__

7__   8__   3__   5__   6__   2__

5__   4__   1__   8__   2__   7__

Count by 9s from 9 to 90:

_*9*_ ___ ___ ___ ___ ___ ___ ___ ___ _*90*_
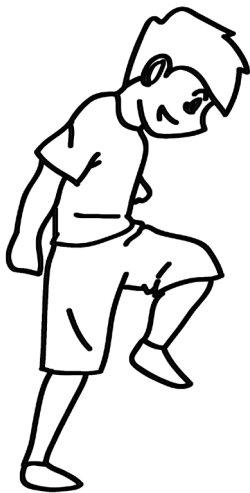
12 and 56

With feet (marching?) or fist keeping the rhythm, repeat with a slow steady beat:

1   2   3   4   5   6   7   8

On the same 4-beat rhythm, marking the rhythm with feet or fist, repeat as needed:

Read with even beat:

Read with even beat:

1   2   3   4

12   is   3 times   4

5   6   7   8

56   is   7 times   8

1	2	3	4
12	is	3 times	4
5	6	7	8
fifty -	six is	7 times	8

Based on that information:

12 = _____ × _____   You see 12, and you keep counting: 3 times 4.

56 = _____ × _____   You see 56 and you keep counting: 7 times 8.

Now we know two different Factor pairs for 12, 16, 36:

—⟨12⟩—   —⟨16⟩—   —⟨36⟩—   —⟨56⟩—

—⟨12⟩—   —⟨16⟩—   —⟨36⟩—   —⟨49⟩—

—⟨21⟩—   —⟨64⟩—   —⟨9⟩—   —⟨21⟩—