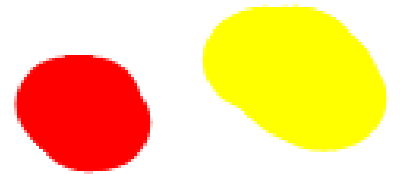


**Multiplication as you know it is
“repeated addition” starting at 0.**

**BUT it can also be repeated
subtraction!**

**The first number tells us “how many groups and
if we should add or subtract” and the second
number tells us “how many in each group”**

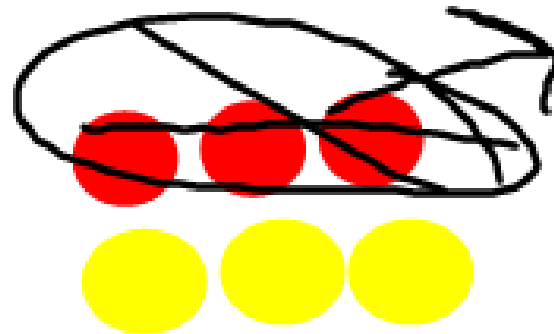
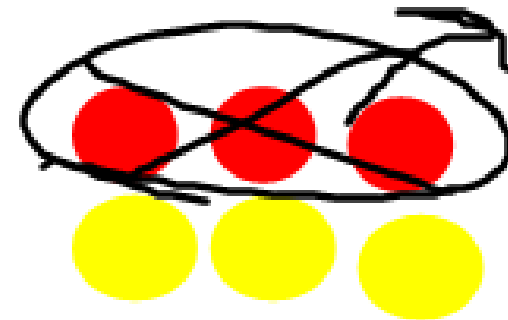
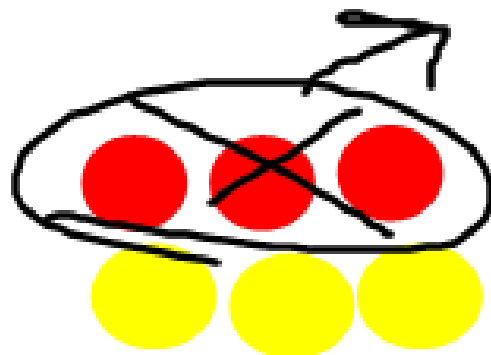
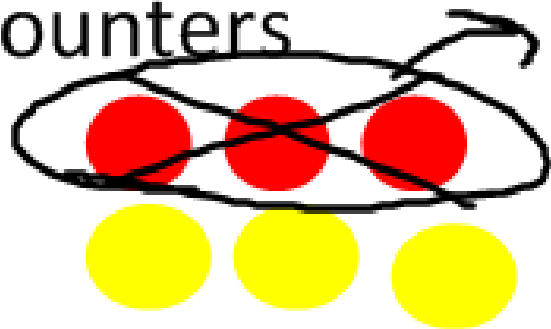
$$(-4) \times (-3)$$



words: subtract 4 groups of -3

Repeated subtraction: $0 - (-3) - (-3) - (-3) - (-3)$

counters

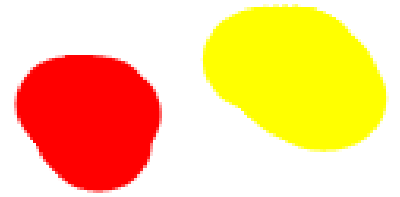


$$(-4) \times (-3) = +12$$

in the bank

money: depositing is adding.

Withdrawing is subtracting



The temperature started at 2 degrees and rose 3 degrees each hour for 7 hours. What is the temperature now?

→ how much each time.

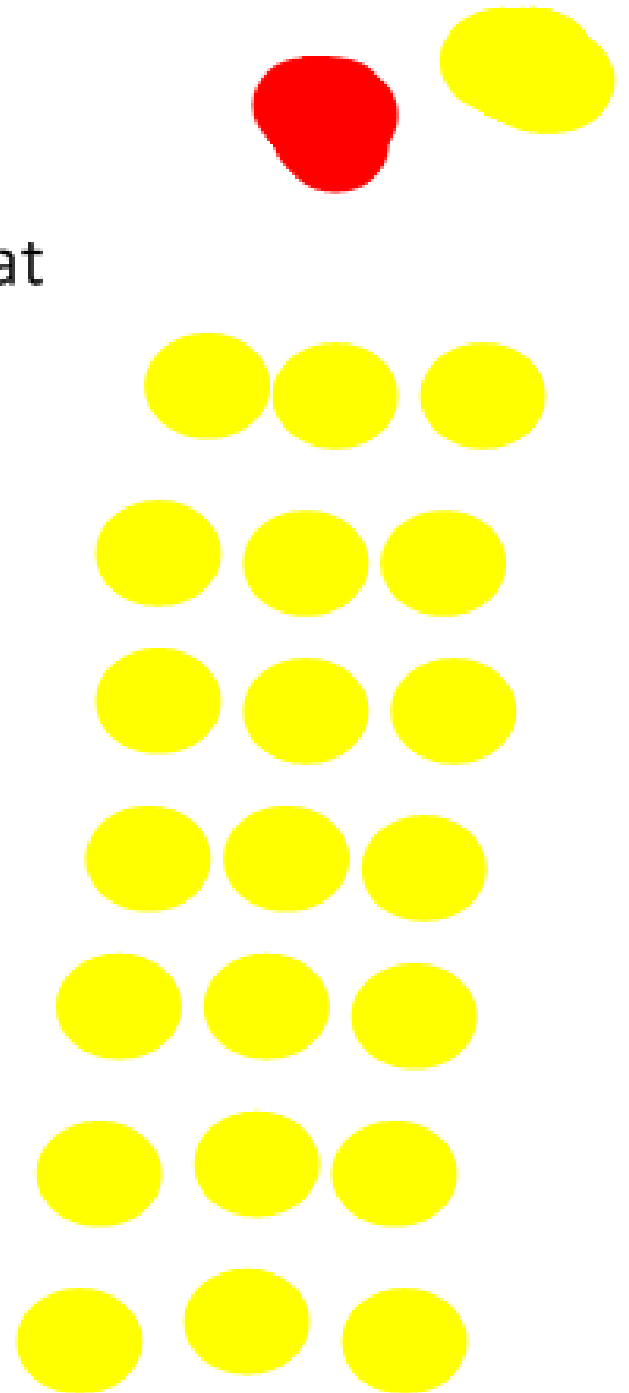
$$7 \times 3 = 21$$

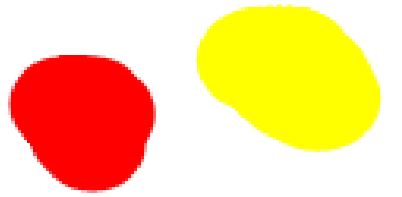
how much the temp went up

$$2 + 21 = 23^\circ$$

The temp now is 23°

how many times





The temperature started at 10 degrees and dropped 4 degrees each hour for 5 hours. What is the temperature now.

how much each time
(-4)

of times
(5)

$5 \times -4 = -20$ → how much the temp dropped

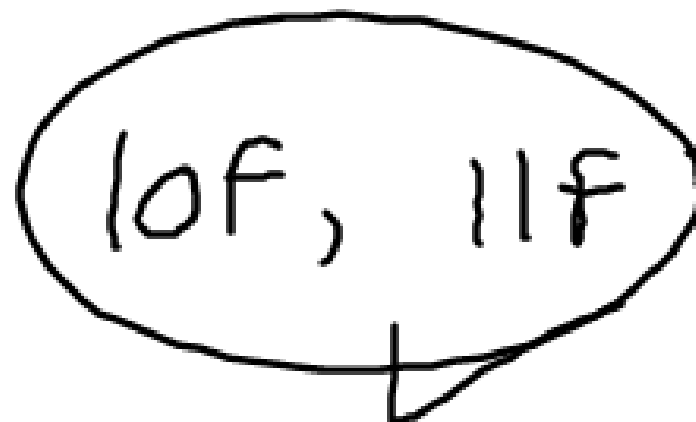
$10 - 20 = -10^\circ$ temp now

Pg 68 #5,6,9,

10a-e, 11a-e,

12-14, 16, 18,

19,20 a



lof, 11f