

How do you add $8 + 9$ by using doubles?



$8 + 9$ can be
rewritten as
 $(8 + 8) + 1$.

In this lesson you will learn
how to add and subtract
within 20 by using doubles.

Let's Review

Doubles Facts



$$1 + 1 = 2$$

$$2 + 2 = 4$$

$$3 + 3 = 6$$

$$4 + 4 = 8$$

$$5 + 5 = 10$$

$$6 + 6 = 12$$

$$7 + 7 = 14$$

$$8 + 8 = 16$$

$$9 + 9 = 18$$

$$10 + 10 = 20$$



Let's Review

Fact Families



$$\begin{aligned}7 + 5 &= 12 \\5 + 7 &= 12 \\12 - 7 &= 5 \\12 - 5 &= 7\end{aligned}$$

Addition and subtraction are related.

Each fact family has 2 addition facts and 2 subtraction facts.

Let's Review

Doubles Fact Families

Doubles fact families only have 1 addition fact and 1 subtraction fact.

$$7 + 7 = 14$$
$$14 - 7 = 7$$



Let's Review

Addends can be grouped in any order to get the same sum.

$$(2 + 2) + 3$$

=

$$(3 + 2) + 2$$



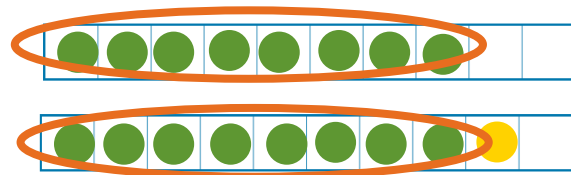
Core Lesson

$$\text{Add } 8 + 9 = 17$$



Using the facts that I already know makes adding and subtracting easier.

I know that $8 + 8 = 16$. 9 is only 1 more than 8.



$$(8 + 8) + 1$$

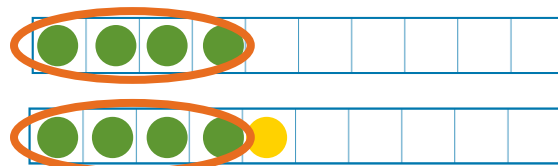
$$16 + 1 = 17$$

A Common Misunderstanding

Forgetting to double the smaller number when using doubles plus 1.



Add $5 + 4$ using doubles.



$$(4 + 4) + 1 = 9$$

$$(5 + \text{X}) + 1 = 11$$

$$5 + 4 = 9$$

Core Lesson

Add $8 + 6$.

Can I use doubles even if I need to add more than 1?



You can use doubles plus 2!

Core Lesson

$$\text{Add } 8 + 6 = 14$$

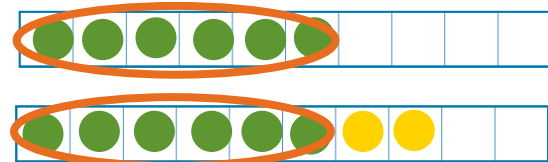


I know that
 $6 + 6 = 12$.

8 is 2 more
than 6.

$$(6 + 6) + 2$$

$$12 + 2 = 14$$



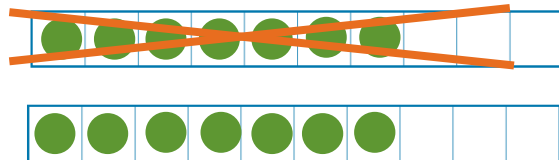
Core Lesson

Subtract $14 - 7$.



I can think about
addition when I
subtract!

I know that
 $7 + 7 = 14$.



$$14 - 7 = 7$$

Core Lesson

Subtract $13 - 6$.

Thinking about the doubles facts can help me solve the problem.

13 is 1 more than 12, so
 $(6 + 6) + 1 = 13$.

I know that
 $6 + 6 = 12$.



$$13 - 6 = 7$$



In this lesson you have learned
how to add and subtract within
20 by using doubles.