

Integers

Adding Integers with the SAME SIGN

Example 1: $5 + 7 =$	Model:
Example 2: $-5 + (-7) =$	Model:

Multiplying & Dividing Integers with DIFFERENT SIGNS

Multiplying	Dividing
Example 13 : $-4(9) =$	Example 15: $-49 \div 7 =$
Example 14: $8(-7) =$	Example 16: $\frac{64}{-4} =$

Summary:

× Multiplying & Dividing ÷

Rule: To subtract an integer,

_____.

Example 5:

$$12 - (-7) =$$

Example 6:

$$-9 - 4 =$$

Example 7:

$$-15 - (-3) =$$

Example 8:

$$7 - 10 =$$

Summary:

— Subtracting —

Multiplying & Dividing Integers with the SAME SIGNS

Multiplying	Dividing
Example 9: $6(8) =$	Example 11: $24 \div 3 =$
Example 10: $-11(-9) =$	Example 12: $\frac{-20}{-4} =$

Adding Integers with DIFFERENT SIGNS

Example 3: $-5 + 7 =$	Model:
Example 4: $5 + (-7) =$	Model:

Summary:

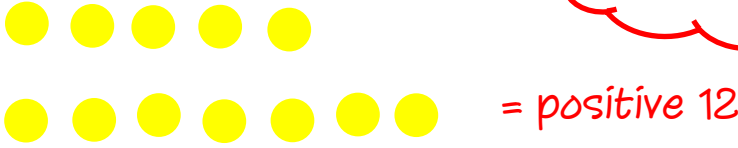
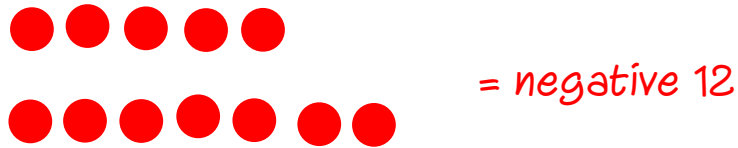
+ Adding +

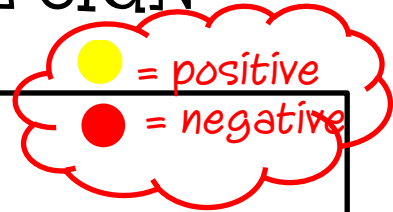
Below I have worked out all of the problems, written in the summary, and models for adding integers. Feel free to adapt it to your students. For example, in "modeling" I usually use integer chips in the beginning and use the number line later. You could always do that differently. Also, when it comes to the "summary", I have my students write this piece. I believe that section should be student generated so that it makes sense to them and will serve as a better study tool.

ENJOY! 😊

Integers

Adding Integers with the SAME SIGN

<p>Example 1:</p> $5 + 7 = 12$	<p>Model:</p>  <p>= positive 12</p>
<p>Example 2:</p> $-5 + (-7) = -12$	<p>Model:</p>  <p>= negative 12</p>



Multiplying & Dividing Integers with DIFFERENT SIGNS

Multiplying	Dividing
<p>Example 13 :</p> $-4(9) = -36$	<p>Example 15:</p> $-49 \div 7 = -7$
<p>Example 14:</p> $8(-7) = -56$	<p>Example 16:</p> $\frac{64}{-4} = -16$

Summary: When multiplying or dividing: If the signs are the same, the answer is positive. If the signs are different, the answer is negative.

+	+	=	+
-	-	=	+
+	-	=	-
-	+	=	-

× Multiplying & Dividing ÷

Rule: To subtract an integer,

"Keep, Change, Change" or "Add the Opposite"

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Example 5:

$$12 + (+7) = 19$$

Example 6:

$$-9 +^{-}4 = -13$$

Example 7:

$$-15 + (+3) = -12$$

Example 8:

$$7 +^{-}10 = -3$$

Summary: *When subtracting, change the subtraction sign to addition and switch the sign of the next integer. Now it's an addition problem and you will use the same rules as we did for addition.*

—Subtracting —

Multiplying & Dividing Integers with the SAME SIGNS

Multiplying

Example 9:

$$6(8) = 48$$

Example 10:

$$-11(-9) = 99$$

Dividing

Example 11:

$$24 \div 3 = 8$$

Example 12:

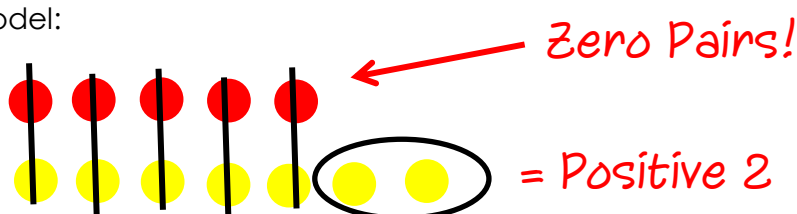
$$\frac{-20}{-4} = 5$$

Adding Integers with DIFFERENT SIGNS

Example 3:

$$-5 + 7 = 2$$

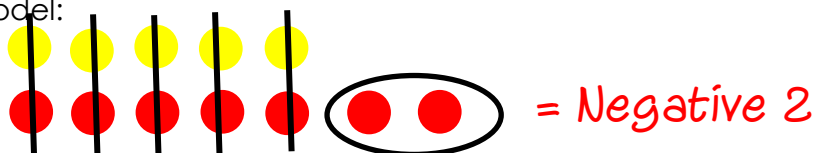
Model:



Example 4:

$$5 + (-7) = -2$$

Model:



Summary: If the signs are the same, add and keep their sign.
If the signs are different, find the *difference*, then take the sign of the integer with the larger absolute value.

+ Adding +

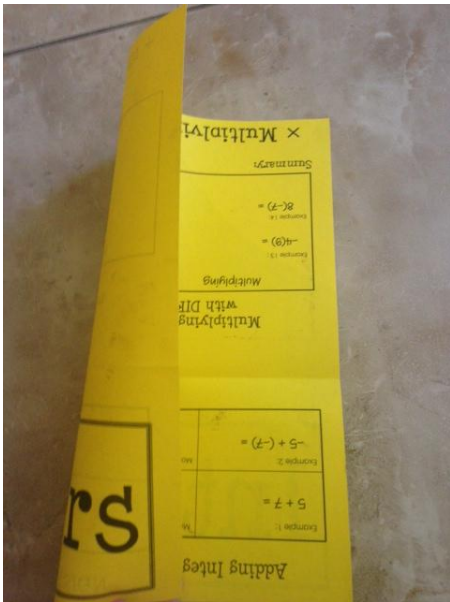
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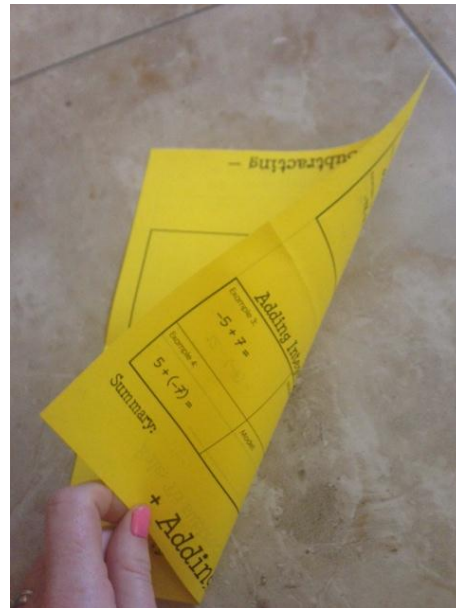
Directions for putting together the integer foldable!

Step 1:

Print pages 1 & 2
front to back as shown:

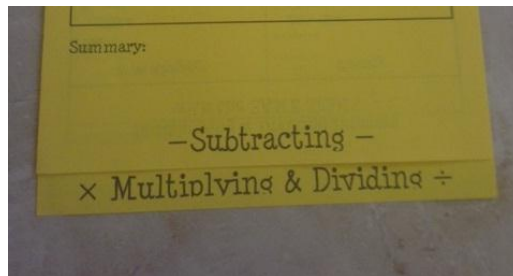


Print pages 3 & 4
front to back as shown:



Step 2: Place the page that says “Multiplying & Dividing” (at the very bottom) face up on your desk.

Step 3: Place the page that says “Subtracting” (at the very bottom) face up on top of the other page, so that you can just see the bottom of the original page, as shown:



Step 4: Fold over both pages so that “Adding” is just above where it says “Subtracting” and the “Integers” title is at the very top.

Step 4: Staple and you're done!

