7th Grade
Oct 2, 2020

Please get out your video notes and your take-home quiz.

Today we will:
-review video notes
-do examples
-complete absolute value notes
-start ICA

HOMEWORK:

Assignment in ALEKS due Oct6

OPERATIONS WITH INTEGERS

ADD

SUBTRACT

MULTIPLY

DIVIDE

HOW DO I ADD INTEGERS WITH THE SAME SIGN? **[+]**

Add their absolute values.
The sum is positive if both integers are positive.
The sum is negative if both integers are negative.
Examples: 3+4=7   -2+(-4)= -6

HOW DO I ADD INTEGERS WITH DIFFERENT SIGNS?

Subtract their absolute values.
The sum is __positive__ if the __positive__ integer's absolute value is greater.
The sum is __negative__ if the __negative__ integer's absolute value is greater.
Examples: 7+(-11) = -4   -2+9=7

HOW DO I SUBTRACT INTEGERS WITH THE SAME SIGN? **[−]**

Add its opposite. Then follow the rules for adding.
Another way to say it is "same, change, change."

Example: 4-15= 4+ (-15) = -11

HOW DO I SUBTRACT INTEGERS WITH DIFFERENT SIGNS?

Add its opposite. Then follow the rules for adding.

Two negatives next to each other make a positive!

18- (-2) = 18 + (+2) = 20

-5 - 11 = -5 - (+11) = -5 + (-11) = -16

HOW DO I MULTIPLY INTEGERS WITH THE SAME SIGN? **[×]**

HOW DO I MULTIPLY INTEGERS WITH DIFFERENT SIGNS?

HOW DO I DIVIDE INTEGERS WITH THE SAME SIGN? **[÷]**

HOW DO I DIVIDE INTEGERS WITH DIFFERENT SIGNS?

Label the top of the page:

2-3 Subtracting Integers

Examples: Copy these problems and their answers.

Add the opposite (OR) Same change change

Subtract.

34. $\overset{S}{1}\overset{c}{2}\overset{c}{5} - (-114)$

$125 + 114$

$\boxed{239}$

35. $\overset{S}{-3}\overset{c}{2}\overset{c}{0} - (-106)$

$-320 + 106$

$\boxed{-214}$

$3\overset{1}{\cancel{2}}0$
-106
$\overline{214}$

36. $\overset{S}{-2}\overset{c}{2}00 \overset{c}{-}(-3500)$

$-2200 + 3500$

1300

To find the distance between two integers, you can:

1. Use a number line:

Find the distance between -3 and 7

$$\text{-3 -2 -1 0 1 2 3 4 5 6 7}$$
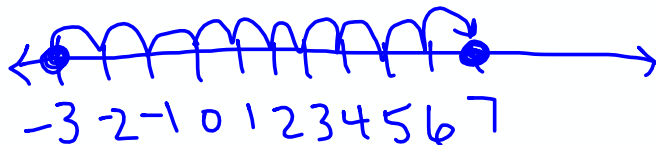
10 units

or 2: subtract and take the absolute value. Remember, distance is ALWAYS positive!

Find the distance between each pair of integers. (Example 3)

25. -18 and -12

$$-18 - (-12)$$
$$-18 + 12$$
$$|-6|$$
$$= 6$$

26. -3 and -11

$$-3 - (-11)$$
$$-3 + (+11)$$
$$|8|$$
$$= 8$$

27. -15 and 7

$$-15 - 7 =$$
$$-15 + (-7)$$
$$\underset{11 + -7}{-15}$$
$$-22$$
$$|-22| = 22 \text{ units}$$

To Row Row Row Your Boat

Same signs, add and keep!

different signs, subtract.

Keep the sign of the bigger number

then you'll be exact!

Absolute Value Examples/Notes:

Examples like this:

$$|a| + |b| = c$$

Examples like this:

$$|a + b| = c$$

Left column:

① $|-7| + |-11| = 18$

7 + 11

② $|80| + |-12| =$

80 + 12 = (92)

③ $|-12| - |15| =$

12 − 15 = −3

④ $|32| + |16| =$

32 + 16 = 48

⑤ $|40| - |-17| =$

40 − 17 = 23

Right column:

① $|-2 + 5| = 3$

$|+3|$

② $|-64 + 7| = 57$

$|-57|$

③ $|-8 + (-14)| = 22$

$|-22|$

④ $|17 + (-5)| = 12$

$|12|$

⑤ $|21 + (-6)| = 27$

$|-27|$

Challenge: $|-9| - |-5 + 7| + |12| =$

9 − $\underbrace{|2|}_{2}$ + 12

7 + 12

19

TITLE:

Integers

Math

Chapter

2

Date	Lesson	Topic/Assignment
9/28	1	Integers and Abs Value. Video Notes
9/29	1	HW Practice WS
9/29	1	Abs Value Examples
9/29	ALL	Operations with Integers Foldable
9/30	2	Add Integers Video Notes
10/1	2	Skills Practice WS
10/2	3	Subtract Integers Video Notes
10/2	3	Practice WS

Examples

$$\overset{s}{6} + \overset{c}{-8} \overset{c}{=} -2$$

$$\overset{s}{-9} \overset{c}{+} \overset{c}{-3} = -12$$

$$4 + -8 = -4$$

$$\overset{s}{-5} \overset{c}{+} \overset{c}{2} = -7$$

$$\overset{s}{-12} \overset{c}{+} (\overset{c}{+7}) = -5$$

$$\overset{s}{5} \overset{c}{+} (\overset{c}{+10}) = 15$$

$$\overset{s}{-47} \overset{c}{-} \overset{c}{+34} =$$

$$-47 + -34 = -81$$

$$\overset{s}{-15} \overset{c}{-} (\overset{c}{-14}) =$$

$$-15 + \ +14 = -1$$

Name_____

PRACTICE

Unit ____ Lesson ____ Due Date _____

Examples to put under your subtracting integers notes: *SCC or

Guided Practice

Find each difference. (Examples 1 and 2)

1. $3 - 5$

2. $-10 - 14$

3. $17 - (-14)$

4. $-7 - (-11)$

Find the distance between each pair of integers. (Example 3)

5. -1 and -7

6. -8 and 8

7. -4 and 6

8. Moira dug a hole 2 feet deep to transplant a shrub. The shrub stands 3 feet above the ground. Write an expression to find the distance from the bottom of the hole to the top of the shrub. What is the distance? (Example 4)

Questions?

Please work on
Pg65: #13-33.
Label it in your INB.
We will check near end of
class or when you are done.

Name_____

Unit ____ Lesson ____ Due Date _____

PRACTICE

Independent Practice

Find each difference. (Examples 1 and 2)

9. $6 - 7$

10. $4 - 8$

11. $-12 - (-7)$

12. $-15 - (-6)$

13. $11 - (-14)$

14. $9 - (-8)$

15. $-5 - 2$

16. $-9 - 3$

17. $5 - (-10)$

18. $1 - (-18)$

19 $-15 - (-14)$

20. $-12 - (-11)$

21. $-20 - (-30)$

22. $-38 - (-40)$

23. $-32 - 28$

24. $-47 - 34$

Find the distance between each pair of integers. (Example 3)

25. -18 and -12

26. -3 and -11

27. -15 and 7

28. -6 and 12

29. 5 and -15

30. 12 and -7

31. At the end of the first round of a game show, Jillian had a score of 40 points and Marty had a score of -50 points. Find the difference between their two scores. (Example 4)