

9-15-17

Aim: SWBAT simplify expressions with integers.

HW: Packet Page 22

Quiz Monday

Do Now: Packet Page 20

Homework - Multiplying & Dividing Integers

- | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|
| 1) $4 \cdot -9$
-36 | 2) $-5(-7)$
35 | 3) $-12(0)$
0 |
| 4) $\frac{-64}{-8} \rightarrow 8$ | 5) $\frac{-32}{4} \rightarrow -8$ | 6) $\frac{50}{-10} \rightarrow -5$ |
| 7) $-9(-11)$
99 | 8) $-12(8)$
-96 | 9) $-13 \cdot -20$
260 |
| *10) $\frac{0}{29} \rightarrow 0$ | *11) $\frac{65}{0}$ undefined | 12) $\frac{-36}{3} \rightarrow -12$ |
| 13) $-17(18)$
-306 | 14) $-4(-9)(8)$
288 | 15) $6(-5)(7)$
-210 |
| 16) $\frac{30}{-15} \rightarrow -2$ | 17) $\frac{56}{-7} \rightarrow -8$ | 18) $\frac{-36}{4} \rightarrow -9$ |
| 19) $-9(-8)(-11)$
-792 | 20) $42(-3)(0)$
0 | 21) $-5(-7)(-13)$
-455 |
| 22) $\frac{-48}{-6} \rightarrow 8$ | 23) $\frac{42}{-2} \rightarrow -21$ | 24) $\frac{-60}{-12} \rightarrow 5$ |

Find the mean of the data: To find the mean of a set of data, you first add up all the numbers, and then divide your sum by the number of elements)

25) 8, 5, -4, 9, -3, 11, 2

26) -16, 2, -18, 4, -11, -8, -6, 5

$$\rightarrow \frac{8+5+(-4)+9+(-3)+(11)+2}{7}$$

$$\rightarrow \frac{28}{7}$$

$$\rightarrow 4$$

$$\rightarrow \frac{(-16)+2+(-18)+4+(-11)+(-8)+(-6)+5}{8}$$

$$\rightarrow \frac{-48}{8}$$

$$\rightarrow -6$$

$$-\frac{3}{4} = \frac{-3}{4} = \frac{3}{-4}$$

$$\frac{-2}{-5} = \frac{2}{5}$$

AIM: SWBAT expressions with integers.

DO NOW: READ THE DIRECTIONS FIRST !!!!!!!!!!!

DIRECTIONS: DO NOT COMPUTE!! State whether the answer will be POSITIVE, NEGATIVE or ZERO. Write the WORD on the line.

Rules for Adding/Subtracting

Same signs - Add + Keep

Different signs - Subtract + Think

Rules for Multiplying/Dividing two Integers

Same signs - Positive

Different signs - Negative

Write the WORD (positive, negative or zero). No NUMBER answers. Be Careful, Check the Operation FIRST (addition, subtraction, multiplication, division), then choose your rules!

1) $(-19)(-10)$
Positive

2) $-27 + 96$
Positive

3) $-24 \div (-19)$
Negative

4) $-80 \div 80$
Zero

5) $-152 \div 4$
Negative

6) $53 + 9$
Positive

7) $(14)(7)$
Positive

8) $(0)(9)$
Zero

9) $\frac{-16}{-4}$
Positive

10) $32 - 12$
Positive

11) $0 \div 5$
Positive

12) $-42 \div 50$
Negative

13) $15 - 27$
Negative

14) $57 - 42$
Positive

15) $(29)(-30)(-20)$
Positive

16) $-4 \div 4$
Zero

17) $-49 \div -7$
Positive

18) $(-4)^{23}$
Negative

19) $-7 + 7$
Zero

* 20) $-(-5)^{10}$
Negative

↙

$$- [(-5)(-5)(-5)(-5)(-5)(-5)(-5)(-5)(-5)(-5)]$$

BEWARE OF MULTIPLYING MORE THAN 2 NUMBERS!!!!

Remember . . . two negatives = a positive

1) $-1 \cdot -1 \cdot -1$

2) $-1 \cdot -1 \cdot -1 \cdot -1$

3) $-1 \cdot -1 \cdot -1 \cdot -1 \cdot -1$

When multiplying an **ODD** number of negatives your answer will be negative.When multiplying an **EVEN** number of negatives your answer will be positive. $(-2)^9$ will be negative $(-2)^{100}$ will be positive $(-2)^{203}$ will be negative

pos.
4) $(-6)(-9)(2)$
108

neg.
5) $(-8)(-6)(-2)$
-96

pos.
6) $(-4)(-2)(-5)(-10)$
400

neg.
7) $5(-7)$
-35

pos.
8) $-6 \cdot -3$
18

pos.
9) $-91 \div -7$
13

neg.
10) $240 \div -15$
-16

pos.
11) $(-5)(-3)(7)$
105

pos.
12) $(7)(4)(-2)(-1)$
56

CLASSWORK:

I know an expression is in simplest form when it has:

1) parentheses are eliminated with distribution

AND

2) all like terms are combined

Simplify each expression.

order of answer

· alphabetical order
· constants go last

1) $k + 12k + 21$

$13k + 21$

2) $13a + 9a + 8$

$22a + 8$

3) $y + 9 + 14 + 2y$

$3y + 23$

4) $4f + 7q + 11f + 8g$

$15f + 8g + 7q$

5) $12a - 9a + 4b$

$3a + 4b$

6) $17x + 15 - 3x$

$14x + 15$

7) $6(m + 21) + 8m$

$6m + 126 + 8m$

$14m + 126$

8) $18y + 5(7 + 3y)$

$18y + 35 + 15y$

$33y + 35$

9) $14(b + 3) - 8b$

$14b + 42 - 8b$

$6b + 42$

10) $6(x + y) + 4(2x + 3y)$

$6x + 6y + 8x + 12y$

$14x + 18y$

11) $7 + 5(13a + 6) + 4a$

$7 + 65a + 30 + 4a$

$69a + 37$

12) $2[3 + 3(a + 4)]$

$2[3 + 3a + 12]$

$6 + 6a + 24$

$6a + 30$

Homework:

1) $10x + 7 + 6x$

2) $21n + 15 + n - 2$

3) $-13x + 21y - 14x - y$

4) $5x^2 - 20x - 8x^2 - 8x$

5) $6ab + 3a - 2ab - -6a$

6) $3xy - 12x + 2xy - x$

7) $-x + 2y + 3x - 5y$

8) $-7x - 2x - 8y - 2y$

9) $12n - 16 + 2 - 17n$

10) $-5m - 20 + 8m - 8$

11) $-15x - 10x^2 + 5x - x^2$

12) $6x + 3y - 2x - -6y$

13) $-x - 2y - 8x - 2y$

14) $7x + 11xy + x + 9$

15) $mn + 4m + 6n + 2mn$

16) $-7(x - 8)$

17) $9(2x + 8)$

18) $-3(-8x + 12)$

19) $y(4x - 7)$

20) $-(6x - 13)$

21) $6(x + 2) + 8x$

22) Find the perimeter of the rectangle in simplest form. (Remember, perimeter is the distance around the outside of a polygon.)

