

## Homework Questions

p.24 #13-24, 27-34

30, 18, 32, 33, 34

$$18. -16 - [2 + (-6)] - [2 + (-6)]$$

$$-16 - 63 + +4$$

$$-75$$

$$30. 4(3-y) + 2(1-y)$$

$$12 - 4y + 2 - 2y$$

$$\underline{-6y + 14}$$

$$32. 6m - 4n + (-7)m - (-5)n$$

$$6m - 4n - 7m + 5n$$

$$\underline{-m + n}$$

$$33. (-2r + s + 5) + 2(r - 3s + 2)$$

$$\cancel{-2r} + s + 5 + \cancel{2r} - 6s + 4$$

$$\underline{-5s + 9}$$

$$34. (6x - 5y + 4) + 2(-2x + 3y - 2)$$

$$6x - 5y + 4 - 4x + 6y - 4$$

$$\underline{2x + y}$$

## Homework Assessment

8/31

$$20. (3 - 6 - 9) - [8 + (-4) - (-7)]$$

$$30. 4(3 - y) + 2(1 - y)$$

remember to  
show your work!



## Multiplication

many ways to write multiplication:

$$5 \times 3 \quad (5)(3) \quad 5 \cdot 3$$

multiplying with negatives

$$(-)(-) = +$$

$$(-)(+) = -$$

$$(+) (+) = +$$

$$(-)(-)(-) = -$$

$$(-)(+)(+)(-)(-)(+)(-)(-)(+) = -$$

even # of neg  $\Rightarrow +$   
 odd # of neg  $\Rightarrow -$

multiplying by zero

$$(0)(-7) = 0$$

$$(3/5)(0)(-12349) = 0$$

multiplying by negative 1

$$(2)(-1) = -2$$

$$(-1)(9/14) = -9/14$$



## multiplying with fractions

Multiply numerators together.

Multiply denominators together.

Whole numbers go in the numerator.

$$\left(\frac{3}{4}\right)\left(\frac{-5}{1}\right)\left(\frac{-16}{1}\right)\left(\frac{1}{5}\right) = \frac{\cancel{3} \cdot \cancel{5} \cdot 16 \cdot 1}{4 \cdot \cancel{5}} = \frac{12}{1} = \textcircled{12}$$

your turn!

$$\frac{\cancel{24}}{\cancel{20}} = \textcircled{12}$$

$$(-4) \cdot 3 \cdot (-2) \left(\frac{1}{3}\right) = \textcircled{8}$$

$$3 \cdot \frac{1}{3} = 1 \quad 715 \cdot \frac{1}{715} = 1$$

## Exponents: repeated multiplication

$$(-5)^2 = (-5)(-5) = 25$$

$$(-5)^3 = (-5)(-5)(-5) = -125$$

$$(-2)^2 = (-2)(-2) = 4$$

$$(-2)^3 = (-2)(-2)(-2) = -8$$

$$(-1)^2 = 1$$

$$(-1)^3 = -1$$

$$(-1)^4 = 1$$

$$(-1)^5 = -1$$

$$(-1)^9 = -1$$

$$(-1)^{20} = 1$$

$$(-)^{\text{even}} = +$$

$$(-)^{\text{odd}} = -$$

$$(-3)^2(1/27)(-12)$$

$$(-3)^2 \left(\frac{1}{27}\right)(-12)$$

$$\frac{9 \cdot 1 \cdot -12}{27 \cdot 3} = (-4)$$

$$\frac{-108}{27} = -4$$

## Multiplying Variables

unlike addition, you can multiply anything together

$$2(-3x)(-5y)$$

$$30xy$$

$$2 \cdot 3 \cdot 4$$

$$6 \cdot 4$$

*-4xz bannana*

$$(-4x)(z)(\text{bananna})$$

$$2(-3x-5y)$$

**your turn!**

$$(-5r)(-2s)(-6)$$

Homework: p.30 #1-18

## Attachments

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gremlin