

Homework Questions

p.24 #13-24, 27-34

27, 28, 29

$$27. 8c + 2(c+3)$$

$$8c + 2c + 6$$

$$\textcircled{10c + 6}$$

$$28. 5(d+2) - 3d$$

$$5d + 10 - 3d$$

$$\textcircled{2d + 10}$$

$$29. 7(x+2) + 4(x-4)$$

$$7x + 14 + 4x - 16$$

$$\textcircled{11x - 2}$$

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

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

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

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

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

$$(-)(+)(+) \underbrace{(-)(-)}_{+} (+) \underbrace{(-)(-)}_{+} (+) = -$$

An even number of negatives = positive
An odd number of negatives = negative

multiplying by zero

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

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

Anything times zero is zero!

multiplying by negative 1

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

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

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

Multiplying by negative 1, just changes the sign

$$(-3)(-2)(-1)(4)(5)$$

$$-(6 \cdot 20)$$
$$\textcircled{-120}$$

$$6 \cdot -1 \cdot 20$$
$$-120$$

your turn!

$$(-5)(-2)(3)(-1)$$

$$-30$$

$$24(-15)(0)(13)$$

$$\textcircled{0}$$

multiplying with fractions

Multiply numerators together.

Multiply denominators together.

Whole numbers go in the numerator.

$$\left(\frac{3}{4}\right)\left(\frac{-5}{1}\right)\left(\frac{-16}{1}\right)\left(\frac{1}{5}\right) = \frac{3 \cdot 5 \cdot 16}{4 \cdot 5} = \frac{240}{20} = 12$$

12

your turn!

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

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

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

Exponents: repeated multiplication

$$\begin{aligned}(-5)^2 &= (-5)(-5) = 25 \\ (-5)^3 &= (-5)(-5)(-5) = -125 \\ (-2)^2 &= (-2)(-2) = 4 \\ (-2)^3 &= (-2)(-2)(-2) = -8\end{aligned}$$

$$\begin{aligned}(-1)^2 &= 1 \\ (-1)^3 &= -1 \\ (-1)^4 &= 1 \\ (-1)^5 &= -1 \\ (-1)^9 &= -1 \\ (-1)^{20} &= 1\end{aligned}$$

(negative)^{even} = positive
(negative)^{odd} = negative

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

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

$$\cancel{9} \cdot \frac{1}{\cancel{27}_3} \cdot -12 = (-4)$$

your turn!

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

Multiplying Variables

unlike addition, you can multiply anything together

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

$$30xy$$

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

$$-4xz \text{ banana}$$

$$2 \cdot 3 \cdot 4 \quad 2(3+4)$$

6 · 4

your turn!

$$(-5r)(-2s)(-6) = 60rs$$

Homework: p.30 #1-18

Attachments

gremlin