

Name: _____

Date: _____



WORKING WITH SIGNED NUMBERS ON THE CALCULATOR

N-GEN MATH[®] 7



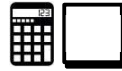
The calculator can do much of what we have worked with in this unit in terms of signed numbers. Most scientific calculators will have a button to be pushed before the number is entered to indicate that it is negative. Although this button looks like the subtraction button, it is not. Be careful.

Exercise #1: Find the negative button on your calculator. Then evaluate each of the following expressions first without your calculator and then check your results with your calculator.

(a) $-14 + 6 =$ _____



(b) $0 - 10 =$ _____



(c) $9 - (-7) =$ _____



(d) $-5 - (-8) =$ _____



(e) $-8 \times 5 =$ _____



(f) $-9 \times -6 =$ _____



(g) $-24 \div 3 =$ _____



(h) $-32 \div -8 =$ _____



(i) $(-7)^2 =$ _____



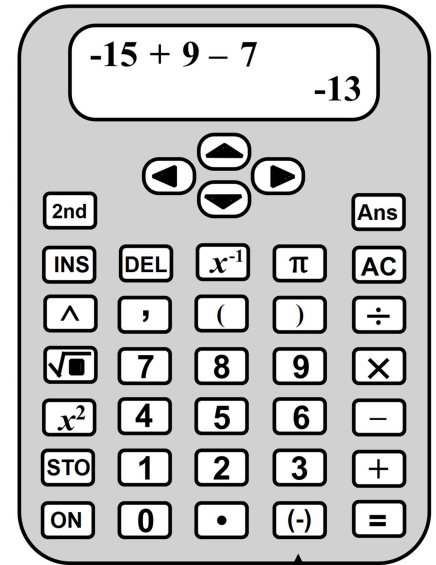
(j) $(-10)^3 =$ _____



(k) $-3(5 - 12) =$ _____



(l) $15 - 2(8) =$ _____



negative button



Properly used, calculators can often help us check the results of more lengthy expressions.

Exercise #2: Find the value of each expression first without using your calculator. Then, type the entire expression into the calculator (carefully!) to check your work.

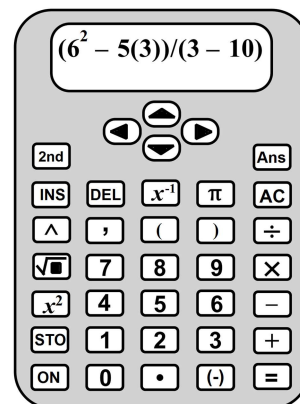
(a) $(-12)(-5) - (-3)(7)$

(b) $12 - 5^2 + 2(4 - 7)$

The calculator can evaluate division in the form of fractions. To evaluate the entire expression at once, **parentheses** should **always** be used to **enclose the numerator and denominator**.

Exercise #3: Given the expression $\frac{6^2 - 5(3)}{3 - 10}$.

First evaluate it without using the calculator. Then check your answer by entering it like it is shown in the picture.



Our answer in *Exercise #3* was an integer. The calculator can often give us the answer to a division problem in its **decimal form**. If we need it as a fraction, the calculator can often convert the decimal to a fraction.

Exercise #4: Consider the expression $\frac{5^2 - 2^2}{8(2 - 5)}$. Evaluate this without the calculator.

Now, use the calculator to find its value. Express it as a decimal and then use the conversion button on your calculator to change it to a fraction if you have one.

Decimal result from calculator: _____ \Rightarrow fraction: _____



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WORKING WITH SIGNED NUMBERS ON THE CALCULATOR

N-GEN MATH[®] 7 HOMEWORK

FLUENCY

1. For each of the following simple calculations with signed numbers, evaluate the expression without the calculator and then check using it.

(a) $-18 + 12 =$ _____



(b) $15 - (-7) =$ _____



(c) $-4 - 9 =$ _____



(d) $-7 \times 8 =$ _____



(e) $-45 \div -5 =$ _____



(f) $(-9)^2 =$ _____



(g) $14 - 20 =$ _____



(h) $-12 \times -5 =$ _____



(i) $32 \div -8 =$ _____



2. Evaluate each of the following expressions without using the calculator and then check with the calculator. Show intermediate steps.

(a) $3(5)^2 - 4(8 + 2) - 3^3$

(b) $(-2)^2(3)^2 - (-5)(2) + 4(-4)$



3. Each of the following expressions, when fully evaluated, results in an integer. First, evaluate the expression without the calculator and then check using the calculator. Show intermediate steps used in finding your final answer.

(a)
$$\frac{2(-3)^2 - 7(-3) + 1}{2(2) + 1}$$

(b)
$$\frac{10^2 - 4(-12) - 5}{2^3 + 3}$$



4. Each of the following expressions when fully evaluated gives a fraction. Evaluate each first without a calculator and express in simplest form. Then, find the result your calculator gives you as a decimal. Convert to a fraction, if possible, on your calculator.

(a)
$$\frac{2(7) - 2(4)^2}{1 - 5^2}$$

(b)
$$\frac{2 - 2^4}{2(-5)^2 + 3(-7) + 6}$$

Decimal result from calculator: _____

Decimal result from calculator: _____

Fraction on calculator: _____

Fraction on calculator: _____

