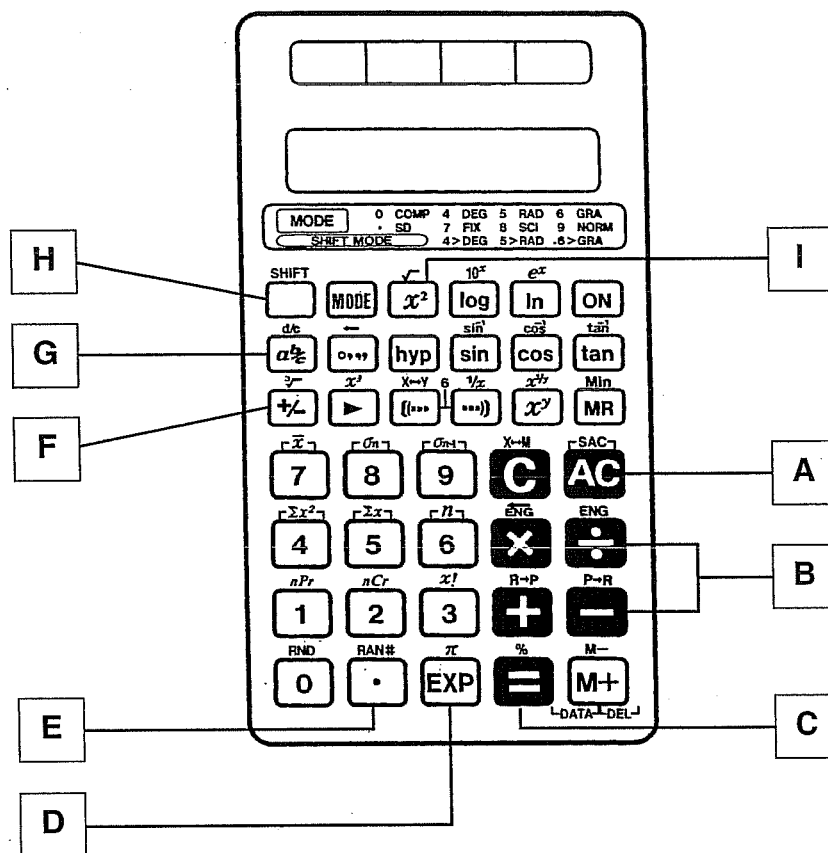


	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144

Photocopy Master 7: The CASIO fx-260SOLAR Calculator Guide

The GED Mathematics Test allows the use of the CASIO fx-260SOLAR calculator for Part I of the test. In this section, we will review the keys and basic functions found on the CASIO fx-260SOLAR calculator so you can become familiar with its basic operations.



- A Clear (C) and All Clear (AC) keys
- B Basic operation keys for addition, subtraction, multiplication, division
- C Equals key
- D Displays the most commonly used number for pi (3.141592654)
- E Decimal point
- F Changes a positive number to a negative
- G Fraction key
- H Use in combination with another key to change function
- I Squares a number or with the shift key calculates square root

When taking the GED Mathematics Test, check your calculator by doing the following:

- Open the calculator
- Visually check for any defects in the solar panel, screen, and keys
- Press the "ON" button (upper right hand key)
- Check that the display screen shows "DEG" in the upper center of the screen and "0" at the right
- Press the number "9" repeatedly to make sure that each place value works
- Try a sample question such as:

$$2 + (6 - 4) \times (10 \div 2) = 12$$

Basic Key Functions of the CASIO *fx-260**SOLAR* Calculator

ON	Power On	AC	Power On/All Clear
C	Clear	▶	Backspace Key
.	Decimal Point	3	Digit or Number Key
SHIFT	Use in conjunction with another key to change function		

Basic Calculations

+	Addition	-	Subtraction
×	Multiplication	÷	Division
=	Equal		

Special Keys

a b/c	Fraction key	+/-	Sign Change
%	Percent Key = SHIFT + =	√	Square Root = SHIFT + X²
EXP	Exponent	X²	Square
[(---)]	Open Parentheses	---)]	Close Parentheses
π	Pi or 3.1415926536 = SHIFT + EXP		

Photocopy Master 8: GED Calculator Instruction Page

CALCULATOR DIRECTIONS

To prepare the calculator for use the **first** time, press the **ON** (upper-rightmost) key. "DEG" will appear at the top-center of the screen and "0." at the right. This indicates the calculator is in the proper format for all your calculations.

To prepare the calculator for **another** question, press the **ON** or the red **AC** key. This clears any entries made previously.

To do any arithmetic, enter the expression as it is written. Press **=** (equals sign) when finished.

EXAMPLE A: $8 - 3 + 9$

First press **ON** or **AC**.

Enter the following:

8 **-** 3 **+** 9 **=**

The correct answer is 14.

If an expression in parentheses is to be multiplied by a number, press **x** (multiplication sign) between the number and the parenthesis sign.

EXAMPLE B: $6(8 + 5)$

First press **ON** or **AC**.

Enter the following:

6 **x** **(** 8 **+** 5 **)** **=**

The correct answer is 78.

To find the square root of a number

- enter the number;
- press **SHIFT** (upper-leftmost) key ("SHIFT" appears at the top-left of the screen);
- press **x²** (third from the left on top row) to access its second function: square root.
DO NOT press **SHIFT** and **x²** at the same time.

EXAMPLE C: $\sqrt{64}$

First press **ON** or **AC**.

Enter the following:

64 **SHIFT** **x²**

The correct answer is 8.

To enter a negative number such as -8,

- enter the number without the negative sign (enter 8);
- press the "change sign" (**+/-**) key which is directly above the **7** key.

All arithmetic can be done with positive and/or negative numbers.

EXAMPLE D: $-8 - -5$

First press **ON** or **AC**.

Enter the following:

8 **+/-** **-** 5 **+/-** **=**

The correct answer is -3.

Photocopy Master 6: GED Mathematics Formulas Page

FORMULAS

AREA of a:

square

$$\text{Area} = \text{side}^2$$

rectangle

$$\text{Area} = \text{length} \times \text{width}$$

parallelogram

$$\text{Area} = \text{base} \times \text{height}$$

triangle

$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{height}$$

trapezoid

$$\text{Area} = \frac{1}{2} \times (\text{base}_1 + \text{base}_2) \times \text{height}$$

circle

$$\text{Area} = \pi \times \text{radius}^2; \pi \text{ is approximately equal to } 3.14$$

PERIMETER of a:

square

$$\text{Perimeter} = 4 \times \text{side}$$

rectangle

$$\text{Perimeter} = 2 \times \text{length} + 2 \times \text{width}$$

triangle

$$\text{Perimeter} = \text{side}_1 + \text{side}_2 + \text{side}_3$$

CIRCUMFERENCE of a circle

$$\text{Circumference} = \pi \times \text{diameter}; \pi \text{ is approximately equal to } 3.14$$

VOLUME of a:

cube

$$\text{Volume} = \text{edge}^3$$

rectangular solid

$$\text{Volume} = \text{length} \times \text{width} \times \text{height}$$

square pyramid

$$\text{Volume} = \frac{1}{3} \times (\text{base edge})^2 \times \text{height}$$

cylinder

$$\text{Volume} = \pi \times \text{radius}^2 \times \text{height}; \pi \text{ is approximately equal to } 3.14$$

cone

$$\text{Volume} = \frac{1}{3} \times \pi \times \text{radius}^2 \times \text{height}; \pi \text{ is approximately equal to } 3.14$$

COORDINATE GEOMETRY

$$\text{distance between points} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2};$$

(x_1, y_1) and (x_2, y_2) are two points in a plane.

$$\text{slope of a line} = \frac{y_2 - y_1}{x_2 - x_1}; (x_1, y_1) \text{ and } (x_2, y_2) \text{ are two points on a line.}$$

PYTHAGOREAN RELATIONSHIP

$$a^2 + b^2 = c^2; a \text{ and } b \text{ are legs and } c \text{ the hypotenuse of a right triangle.}$$

MEASURES OF CENTRAL TENDENCY

$$\text{mean} = \frac{x_1 + x_2 + \dots + x_n}{n}; \text{ where the } x\text{'s are the values for which a mean is desired, and } n \text{ is the total number of values for } x.$$

median = the middle value of an odd number of ordered scores, and halfway between the two middle values of an even number of ordered scores.

SIMPLE INTEREST

$$\text{interest} = \text{principal} \times \text{rate} \times \text{time}$$

DISTANCE

$$\text{distance} = \text{rate} \times \text{time}$$

TOTAL COST

$$\text{total cost} = (\text{number of units}) \times (\text{price per unit})$$

Adapted with permission of the American Council on Education.

Five Steps to Solving Word Problems

1. Understand the problem. What is being asked for? Imagine or draw a picture.
2. Decide what information you need to solve the problem.
3. Choose which operations you will use to solve the problem.
4. Solve the problem and check your work.
5. See if your answer makes sense.



Using the Number Grid

WHOLE NUMBER ANSWERS

Example Mark the number 508 on an answer grid.

Below are three correctly filled in grids for the number 508. On the first grid, the digits start at the left. On the second grid, the digits are centered. On the third grid, the digits occupy the right-most columns.

Correct

5	0	8		
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Correct

	5	0	8	
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Correct

		5	0	8
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Below are two incorrectly filled in grids for the number 508. On the first grid, the circles are not filled in. On the second grid, all of the circles in the first column were filled in.

Incorrect

5	0	8		
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9

Incorrect

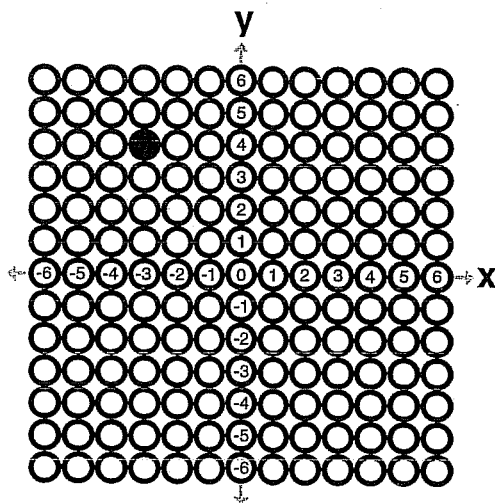
5	0	8		
•	•	•	•	•
0	0	0	0	0
1	1	1	1	1
2	2	2	2	2
3	3	3	3	3
4	4	4	4	4
5	5	5	5	5
6	6	6	6	6
7	7	7	7	7
8	8	8	8	8
9	9	9	9	9



Using the Coordinate Plane Grid

Example 1 Mark the point $(23, 4)$ on a coordinate plane grid.

The point $(23, 4)$ is 3 units *left* of the vertical axis and 4 units above the horizontal axis.



Example 2 Mark the point $(5, -2)$ on a coordinate plane grid.

The point $(5, -2)$ is 5 units *right* of the vertical axis and 2 units below the horizontal axis.

