CALC-0000
Supply Calculator

Instruction Manual

Product Features

- Easy to use pre-programmed functions for trade specific calculations

- Provides material estimates for concrete, block, gravel, deck, fence, studs, flooring and paint

- Calculates accurate dimensions for perimeter, area, volume and weight measurements

- Converts between building dimensions in both imperial and metric

- Units of measure in inches, feet, yards, mm, cm, and m

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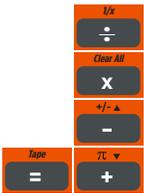
Key Descriptions

CALCULATOR FUNCTION KEYS

Off

- **Off Key:** Turns off the calculator. All temporary registers are cleared.

On/C

- **On/Clear Key:** Turns on the calculator. Press once to clear the display. Press twice to clear all temporary values.

- Mathematical operation keys.

- Keys for entering numbers.

%

- **Percent Key:** Four-function (**+**, **−**, **x**, **÷**) percent key.

/

- **Fraction Key:** Use to enter fractions. Fractions can be entered as proper (1/8, 1/5, 3/16) or improper (5/2, 17/16). If the denominator (bottom value) is not entered, the calculator will default to a 16th of an inch setting.

Conv

- **Convert Key**: Use with number keys to convert between dimensions, or to access special functions with other keys.

Stor

- **Store Key:** Use to store calculations.

Rcl

- **Recall Key:** Use with other keys to recall stored settings and calculations.

LENGTH KEYS

Yds

- **Yards Key:** Enter or convert units to yards. When entering values, press the *Yds* key once for yards, twice for square yards, and three times for cubic yards.

Feet

- **Feet Key:** Enter or convert units to feet as a whole or a decimal. When entering values, press the *Feet* key once for feet, twice for square feet, and three times for cubic feet. Use with the *Inch* and **/** keys to enter feet-inch values. Press the *Feet* key to toggle between fraction and decimal feet.

Inch

- **Inch Key:** Enter or convert to inches as a whole or a decimal. When entering values, press the *Inch* key once for inches, twice for square inches, and three times for cubic inches. Use with the **/** key to enter fractions of an inch values. Press the *Inch* key to toggle between fraction and decimal inches.

Conv **5**

- **Meters (m):** Enter or convert units to meters including square meters and cubic meters.

Conv **7**

- **Centimeters (cm):** Enter or convert units to centimeters including square centimeters and cubic centimeters.

Conv **9**

- **Millimeters (mm):** Enter or convert units to millimeters including square millimeters and cubic millimeters.

Conv **8**

- **Board Feet (Bd Ft):** Enter or convert cubic values to board feet (e.g. 1 Bd Ft = 144 cubic inches).

PROJECT MATERIAL KEYS

Brick Concrete

- **Concrete:** Calculate the number of bags of concrete required, based on an entered or calculated volume (e.g., cubic feet or cubic yards). Press *Concrete* to scroll through standard concrete bag sizes: 80 lb., 60 lb., and 40 lb. This function will calculate the volume of concrete yielded by the entered quantity of bags for each of the three bag sizes.

Conv Brick Concrete

- **Brick:** Calculate the number of standard 8 inch size U.S. bricks required (with 3/8″ mortar) based on entered linear distance or area for both "face" (21 square inch) and "paver" (32 square inch) brick applications. Press *Concrete* to scroll through face, paver, and area values.

Block Size Block

- **Block:** Calculate the number of standard 8″ x 16″ (128 square inch) cinder blocks (including 1/2″ mortar), based on an entered linear distance or calculated area and a stored Block Size.

Prefs Stor Block Size Block

- **Block Size:** Store a custom Block Size. A linear entry is the Block Length and area is Block Area. To store a custom Block Size, enter the block size in square inches and press *Stor Block*. To recall this setting, press *Rcl Block*. The default length is 16 inches and the default area is 128 square inches (includes 1/2″ mortar).

Wt/Vol Gravel

- **Gravel:** Calculate tons of gravel required, based on an entered or calculated volume and a stored Weight per Volume.

Prefs Stor Wt/Vol Gravel

- **Gravel Weight per Volume:** Store a custom number of tons per cubic yard of gravel. To store a custom Gravel Weight Per Volume, enter the tons per cubic yard and press *Stor Gravel*. To recall this setting, press *Rcl Gravel*. The default is 1.5 tons per cubic yard.

Board o.c. Deck

- **Deck:** Find the number of boards for a deck, based on an entered or calculated area and a stored Board Width or Board On-center. Press *Deck* to scroll through numbers of boards required for various "standard" board lengths (12′, 10′, and 8′, 20′, 18′, 16′, and 14′). The last display in this sequence shows the stored Board Width.

Prefs Stor Board o.c. Deck

- **Board Width/O.C.:** Store custom Board Width or Board On-center dimensions, in inches, for deck or fence calculations. To store a custom Board Width or Board Width On-center, enter the custom dimension and press *Stor Deck*. To recall this setting, press *Rcl Deck*. The default is 5-11/16″.

Post o.c. Fence

- **Fence:** Find the number of fence boards, number of posts and number of rails (2-rail and 3-rail) based on an entered or calculated distance, a stored Board Width/O.C. and a stored Post Spacing. The last two displays in this sequence shows the stored Post Spacing On-center (default is 8′) and stored Board Width (default is 5-11/16″).

Prefs Stor Post o.c. Fence

- **Post Spacing:** Store custom Post Spacing On-center dimensions for fence posts in feet-inches. To store a custom Post Spacing, enter the custom dimension and press *Stor Fence*. To recall this setting, press *Rcl Fence*. The default is 8′.

Studs o.c. Studs

- **Studs:** Calculate the required number of studs based on entered linear distance and stored On-center Spacing. Stored on-center spacing is 16″.

  Note: Calculator adds one stud to the calculated answer automatically to account for one on the end.

Prefs Stor Studs o.c. Studs

- **On-center for Studs:** Store custom on-center stud spacing in inches. To store a custom On-center spacing, enter the custom on-center spacing in inches, and press *Stor Studs*. Press *Rcl Studs* to recall this setting. The default setting is 16″.

Project Material Keys (continued)

Sheets / Flooring

- **Flooring:** Calculate the required length of flooring needed for a calculated area based on standard roll widths: 15′, 13′, 12′, or 6′. Press *Flooring* to scroll through the flooring widths.

Conv — Sheets / Flooring

- **Sheets:** Calculate the required number of flooring sheets needed for a calculated area or length. Standard sheet sizes include: 4′ x 8′, 4′ x 9′, 4′ x 10′, and 4′ x 12′. Press *Flooring* to scroll through the sheet sizes.

Tile Size / Custom Tile

- **Custom Tile:** Calculate the number of tiles needed based on a calculated area and custom stored tile size. Use this separately from the regular Tile key.

  Note: This calculation does not include any grout width. Adjust your project material requirements accordingly.

Prefs / Stor — Tile Size / Custom Tile

- **Custom Tile Size:** Store Custom Tile sizes in square inches. For example, if the tile size is 3″ x 6″, the custom tile size will be 18″. To store a custom tile size, enter the dimensions of the tile in inches and press *Stor Custom Tile*. To recall this setting press *Rcl Custom Tile*. The default setting is 24 square inches.

Grout Width / Tile

- **Tile:** Find the number of tiles needed based on a user-stored Grout Width and a calculated area. Press *Tile* to scroll through various standard tile sizes: 24″, 18″, 16″, 13″, 12″, 10″, 8″, 6″, 4″, 2″, and 1″. After the 1″ calculation, the calculator will display the user-stored Grout Width.

  Note: Tile sizes are shown in inches, not in square inches. For example, a 6 inch tile is really 6 inches x 6 inches, or a 36 square inch tile, but it is labeled as a 6 inch size.

Prefs / Stor — Grout Width / Tile

- **Grout Width:** Store a custom Grout Width in inches. This is used when finding the number of tiles required for a calculated area. To store a custom grout width, enter a grout width in inches and press *Stor Tile*. To recall this setting, press *Rcl Tile*. The default setting is 0 or no grout width.

Coverage / Paint

- **Paint:** Calculate volume of paint, based on a stored Paint Coverage per Gallon and a calculated area. Press *Paint* to scroll through quantity in quarts, pints, and gallons.

Prefs / Stor — Coverage / Paint

- **Paint Coverage:** Store a custom Paint Coverage per Gallon in square feet. To store a custom paint coverage, enter the area of coverage per square feet and press *Stor Paint*. Press *Rcl Paint* to recall this setting. The default setting is 350 square feet per gallon.

Conv — Cost / 0

- **Cost:** Calculate the total material cost based on a stored Unit Cost and entered or calculated material quantity.

Prefs / Stor — Cost / 0

- **Unit Cost:** Store a custom Unit Cost for calculating the total cost of calculated materials. To store a custom cost, enter the cost per unit and press *Stor 0*. To recall this setting, press *Rcl 0*. The default is 0.00 (no Unit Cost).

ADDITIONAL FUNCTIONS

[Conv] [• √x]

- **(√x) Square Root**

[Conv] [÷ 1/x]

- **(1/x) Reciprocal:** Find the reciprocal of a number, calculated as 1 divided by that number.
(e.g., press *5 Conv ÷ = 0.2*).

[Conv] [x Clear All]

- **Clear All:** Clear all values, including M+, and return all stored values to the default settings. This does not affect Preference Settings.

[Conv] [− +/- ▲]

- **(+/-) Toggle:** Convert a number to a negative value.

[Conv] [+ π ▼]

- **Pi (π):** Use to calculate various curves using Pi (3.141593).

[Conv] [% x²]

- **x2:** Square the value in the display.

[Conv] [Stor Prefs]

- **Preference Settings:** Use to permanently store custom preferences. See the Appendix for a list of preferences available.

[M+ M-]

- **Memory Key:** Add the displayed value to a temporary calculator Memory. These values will clear when the calculator is shut off.

[Conv] [M+ M-]

- **Memory Minus (M-):** Subtract the displayed value from the temporary calculator Memory.

[Rcl M-R/C] [M+ M-]

- **Memory Recall:** Recall a value from the temporary calculator Memory without clearing it.

[Conv] [Rcl M-R/C]

- **Memory Clear:** Clear the temporary calculator Memory without changing the current display.

[Rcl M-R/C] [Rcl M-R/C]

- **Memory Clear:** Total all values stored in the temporary calculator Memory.

  Note: This will also clear all values in the temporary Memory.

[Rcl M-R/C] [= Tape]

- **Paperless Tape:** Scroll through the past 20 entries or calculations to review figures. Press *Rcl =* to access Paperless Tape mode. Press *+* or *−* to scroll forward or backward. Press *=* to exit mode and continue with a new entry or calculation.

Paperless Tape Example

Add 8 feet, 6 feet and 2 feet, then access the paperless tape mode and scroll back through your entries. Then, back up one entry, exit the tape mode and add 8 feet to the total.

KEYSTROKE	DISPLAY
[On/C] [On/C]	0
[8 Bd Ft] [Feet] [+ π ▼]	8 FEET 0 INCH
[6] [Feet] [+ π ▼]	14 FEET 0 INCH
[2] [Feet] [= Tape]	16 FEET 0 INCH
[Rcl M-R/C] [= Tape]	TTL = 16 FEET 0 INCH
[+ π ▼]	01 8 FEET 0 INCH
[+ π ▼]	02 + 6 FEET 0 INCH
[+ π ▼]	03 + 2 FEET 0 INCH
[− +/- ▲]	02 + 6 FEET 0 INCH
[= Tape]	TTL = 16 FEET 0 INCH
[+ π ▼] [8 Bd Ft] [Feet] [= Tape]	24 FEET 0 INCH

USER SETTINGS

Press **Conv**, then **Stor** to enter User Settings. Press **Stor** to scroll through the main settings. Press the **+** key to enter and advance through sub-settings of each main user setting. Use the **–** key to reverse through the sub-settings. Press the **On/C** key to exit Preferences. See the chart below for a listing of User Settings available.

PRESS [Conv] **AND** [Stor *Prefs*] **: SETTING — FUNCTION**

First press of [Stor *Prefs*]:	Fractional Resolution: 1/16
[+ *π ▾*]	1/32
[+ *π ▾*]	1/64
[+ *π ▾*]	1/2
[+ *π ▾*]	1/4
[+ *π ▾*]	1/8
[+ *π ▾*]	1/16 *(repeats options)*

Second press of [Stor *Prefs*]:	Area Displays: Std.
[+ *π ▾*]	0. SQ FEET
[+ *π ▾*]	0. SQ YD
[+ *π ▾*]	0. SQ M
[+ *π ▾*]	Std. *(repeats options)*

Third press of [Stor *Prefs*]:	Volume Displays: Std.
[+ *π ▾*]	0. CU YD
[+ *π ▾*]	0. CU FEET
[+ *π ▾*]	0. CU M
[+ *π ▾*]	Std. *(repeats options)*

Fourth press of [Stor *Prefs*]:	Meter Linear Displays: 0.000 M
[+ *π ▾*]	FLOAt M *(floating point)*
[+ *π ▾*]	0.000 M *(repeats options)*

Fifth press of [Stor *Prefs*]:	Fractional Mode: Std.
[+ *π ▾*]	COnSt
[+ *π ▾*]	Std. *(repeats options)*

USING THE MEMORY

Store values in the temporary calculator Memory by pressing **M+**. Other Memory functions include:

FUNCTION	KEYSTROKES
Add to Memory	[M+ *M-*]
Subtract from Memory	[Conv] [M+ *M-*]
Recall Total in Memory	[Rcl *M-R/C*] [M+ *M-*]
Display/Clear Memory	[Rcl *M-R/C*] [Rcl *M-R/C*]
Clear Memory	[Conv] [Rcl *M-R/C*]

Memory is semi-permanent, clearing only when you:
- Turn off the calculator
- Press [Rcl *M-R/C*] [Rcl *M-R/C*]
- Press [Conv] [Rcl *M-R/C*]
- Press [Conv] [x *Clear All*] *(Clear All)*

When Memory is recalled ([Rcl *M-R/C*] [M+ *M-*]), consecutive presses of [M+ *M-*] will scroll through the total, the calculated average, and the total count of the accumulated values.

Example:

KEYSTROKE	DISPLAY
[4] [4] [5 *m*] [M+ *M-*]	M+ 445 M
[1] [6] [5 *m*] [M+ *M-*]	M+ 165 M
[7 *cm*] [7 *cm*] [5 *m*] [Conv] [M+ *M-*]	M- 775 M
[Rcl *M-R/C*] [M+ *M-*]	TTL STORED - 165 M
[M+ *M-*]	AVG – 55 M
[M+ *M-*]	CNT 3 M
[Rcl *M-R/C*] [Rcl *M-R/C*]	M+ – 165

Basic Functions

ADDING AND SUBTRACTING DIMENSIONS

Add the following measurements:

- 6 feet 1-1/4 inches
- 14 feet 7-1/4 inches
- 16.75 inches

Then subtract 5-3/8 inches.

KEYSTROKE	DISPLAY
`On/C` `On/C`	0
`6` `Feet`	
`1` `Inch` `1` `/` `4` `+`	6 FEET 1-1/4 INCH
`1` `4` `Feet`	
`7` `Inch` `1` `/` `4` `+`	20 FEET 8-1/2 INCH
`1` `6` `•` `7` `5` `Inch` `=`	22 FEET 1-1/4 INCH
`-` `5` `Inch` `3` `/` `8` `=`	21 FEET 7-7/8 INCH

MULTIPLYING DIMENSIONS

Calculate the perimeter of a room with three walls that each measure 15 feet 3-3/4 inches:

KEYSTROKE	DISPLAY
`3` `x` `1` `5` `Feet` `3` `Inch` `3` `/` `4` `=`	45 FEET 11-1/4 INCH

Multiply 4 feet 8 inches by 10 feet 3-3/4 inches:

KEYSTROKE	DISPLAY
`4` `Feet` `8` `Inch` `x` `1` `0` `Feet` `3` `Inch` `3` `/` `4` `=`	48.125 SQ FEET

DIVIDING DIMENSIONS

Divide 17 Feet 7-3/4 inches into thirds (divide by 3):

KEYSTROKE	DISPLAY
`On/C` `On/C`	0
`1` `7` `Feet` `7` `Inch` `3` `/` `4` `÷` `3` `=`	5 FEET 10-9/16 INCH

Calculate the number of 4 feet 2-1/2 inch pieces that can be cut from a 25 foot board:

KEYSTROKE	DISPLAY
`On/C` `On/C`	0
`2` `5` `Feet` `÷` `4` `Feet` `2` `Inch` `1` `/` `2` `=`	5.940594 *(or 5 whole pieces)*

CALCULATING PERCENTAGES

Add a 15% waste allowance to 3.45 cubic yards:

KEYSTROKE	DISPLAY
`On/C` `On/C`	0
`3` `•` `4` `5` `Yds` `Yds` `+` `1` `5` `%`	3.9675 CU YD

Calculate 22% of $2,150:

KEYSTROKE	DISPLAY
`On/C` `On/C`	0
`2` `1` `5` `0` `x` `2` `2` `%`	473

CALCULATING SQUARE AREA

Calculate the area of a square room with sides measuring 17 feet 5-1/2 inches:

KEYSTROKE	DISPLAY
On/C On/C	0
1 7 Feet 5 Inch 1 / 2	17 FEET 5-1/2 INCH
Conv %	304.7934 SQ FEET

CALCULATING SQUARE ROOT

Calculate the square root of 450:

KEYSTROKE	DISPLAY
On/C On/C	0
4 5 0 Conv •	21.2132

ADDING A WASTE ALLOWANCE TO SQUARED AND CUBIC UNITS

Add a 12% waste allowance to 20 square feet:

KEYSTROKE	DISPLAY
On/C On/C	0
2 0 Feet Feet + 1 2 %	22.4 SQ FEET

Add a 18% waste allowance to 145 cubic feet:

KEYSTROKE	DISPLAY
On/C On/C	0
1 4 5 Feet Feet Feet + 1 8 %	171.1 CU FEET

CONVERTING LENGTH MEASUREMENTS

Convert 12 feet 7 inches to other dimensions, including metric:

KEYSTROKE	DISPLAY
On/C On/C	0
1 2 Feet 7 Inch	12 FEET 7 INCH
Yds	4.194444 YD
Inch	151 INCH
Conv 5	3.835 M
Conv 7	383.54 CM
Conv 9	3835.4 MM

Convert 22 feet 4-1/4 inches to decimal feet:

KEYSTROKE	DISPLAY
On/C On/C	0
2 2 Feet 4 Inch 1 / 4	22 FEET 4-1/4
Feet	22.35417 FEET

Convert 20.75 feet to feet-inches:

KEYSTROKE	DISPLAY
On/C On/C	0
2 0 • 7 5 Feet	20.75 FEET
Inch	249 INCH
Feet	20 FEET 9 INCH

CONVERTING AREA MEASUREMENT

Convert 72 square feet to square yards:

KEYSTROKE	DISPLAY
On/C On/C	0
7 2 Feet Feet	72 SQ FEET
Yds	8 SQ YD

Convert 35 square yards to square feet:

KEYSTROKE	DISPLAY
On/C On/C	0
3 5 Yds Yds	35 SQ YD
Feet	315 SQ FEET

Convert 246 cubic feet to cubic yards:

KEYSTROKE	DISPLAY
On/C On/C	0
2 4 6 Feet Feet Feet	246 CU FEET
Yds	9.111111 CU YD

Sample Project Calculations

Brick	Block Size	Wt/Vol	Board o.c.	Post o.c.
Concrete	**Block**	**Gravel**	**Deck**	**Fence**
Studs o.c.	Sheets	Tile Size	Grout Width	Coverage
Studs	**Flooring**	**Custom Tile**	**Tile**	**Paint**

CONCRETE: BAGS OF

Calculate the number of bags of concrete needed for a patio measuring 14 feet x 9 feet x 4 inches:

KEYSTROKE	DISPLAY
On/C **On/C**	0
1 **4** **Feet** **x** (Clear All) / **9** **Feet** **x** (Clear All) / **4** **Inch** **=** (Tape)	1.555556 CU YD
Concrete (Brick)	BAGS 63.00 (80 Lb)
Concrete (Brick)	BAGS 84.00 (60 Lb)
Concrete (Brick)	BAGS 126.00 (40 Lb)

BRICKS/BLOCKS: NUMBER OF, FOR A WALL

Calculate the number of bricks, both face and paver, and concrete blocks needed to build a 10 feet x 9 feet wall:

KEYSTROKE	DISPLAY
On/C **On/C**	0
1 **0** (Cost) **Feet** **x** (Clear All) / **9** (mm) **Feet** **=** (Tape)	90 SQ FEET
Conv **Concrete** (Brick)	FACE 617.14
Concrete (Brick)	PAVR 405.00
Concrete (Brick)	AREA 90 SQ FEET
Block (Block Size)	BLKS 101.25

Store a custom block area by entering or calculating the new value then pressing *Stor Block* (e.g., *5 Inch x 14 Inch = Stor Block*). Perform a Clear All (*Conv x*) to return to the default setting.

GRAVEL: TONS OF

Calculate how much gravel (in tons) are needed to cover a driveway that is 8 feet x 20 feet, at 4 inches deep:

KEYSTROKE	DISPLAY
On/C **On/C**	0
8 (Bd Ft) **Feet** **x** (Clear All) / **2** (Cost) **0** **Feet** **x** (Clear All) / **4** **Inch** **=** (Tape)	1.975309 CU YD
Gravel (Wt/Vol)	WGHT 2.96 Ton
Gravel (Wt/Vol)	STORED / 1.5 Ton Per CU YD
Gravel (Wt/Vol)	VOL 1.975309 CU YD

Store a custom Tons per Cubic Yard value by entering the new value, then pressing *Stor Gravel* (e.g., *1 • 65 Stor Gravel*). Perform a Clear All (*Conv x*) to return to the default setting.

DECK: NUMBER OF BOARDS

Find the number of boards needed to build a deck, if the deck area measures 12 feet x 11 feet:

KEYSTROKE	DISPLAY
On/C **On/C**	0
1 **2** **Feet** **x** (Clear All) **1** **1** **Feet** **=** (Tape)	132 SQ FEET
Deck (Board o.c.)	BDS 24 (12 Ft)
Deck (Board o.c.)	BDS 28 (10 Ft)
Deck (Board o.c.)	BDS 36 (8 Ft)
Deck (Board o.c.)	BDS 14 (20 Ft)
Deck (Board o.c.)	BDS 16 (18 Ft)
Deck (Board o.c.)	BDS 18 (16 Ft)
Deck (Board o.c.)	BDS 20 (14 Ft)
Deck (Board o.c.) *	BDoc STORED 5-11/16 INCH

* Last press displays the stored Board Width.

Store a custom Board On-center by entering the new value, then pressing **Stor Deck** (e.g., **6 Inch Stor Deck**). Perform a Clear All (**Conv x**) to return to the default setting.

FENCE: NUMBER OF FENCE BOARDS, POSTS AND RAILS

Calculate the number of fence boards, posts, and rails required to build a fence, that is 57 feet 8 inches long:

KEYSTROKE	DISPLAY
On/C **On/C**	0
5 (m) **7** (cm) **Feet** **8** (Bd Ft) **Inch**	57 FEET 8 INCH
Fence (Post o.c.)	BDS 123
Fence (Post o.c.)	POST 9
Fence (Post o.c.)	2-RL 16
Fence (Post o.c.)	3-RL 24
Fence (Post o.c.) *	P-oc STORED 8 FEET 0 INCH
Fence (Post o.c.) *	BDoc STORED 5-11/16 INCH

The last two presses in this example displays stored Post On-center and Board Width.

Store a custom Post On-center by entering a custom value then pressing **Stor Fence** (e.g., **7 Feet Stor Fence**). Perform a Clear All (**Conv x**) to return to the default setting.

STUDS: NUMBER OF

Calculate the number of 16-inch on-center studs needed for a 48 feet 6 inch wall:

KEYSTROKE	DISPLAY
On/C **On/C**	0
4 **8** (Bd Ft) **Feet** **6** **Inch**	48 FEET 6 INCH
Studs (Studs o.c.)	STUD 38*

*Note: Calculator automatically includes one stud for the end of the wall. Store a custom Stud On-center by entering the custom value, then press **Stor Studs** (e.g., **22 Feet Stor Studs**). Perform a Clear All (**Conv x**) to return to the default setting.

FLOORING: LENGTH OF

Calculate the length of flooring needed to cover a floor measuring 14 feet 7 inches x 7 feet in area:

KEYSTROKE	DISPLAY
On/C On/C	0
1 4 Feet 7 Inch x 7 Feet =	102.0833 SQ FEET
Flooring (Sheets)	LNTH 8.51 FEET (12 Ft)
Flooring (Sheets)	LNTH 7.85 FEET (13 Ft)
Flooring (Sheets)	LNTH 6.81 FEET (15 Ft)
Flooring (Sheets)	LNTH 17.01 FEET (6 Ft)

SHEETS: NUMBER OF

Calculate the number of 4 x 8, 4 x 9, 4 x 10, or 4 x 12 drywall sheets needed for a room measuring 14 feet x 16 feet with an 8 foot ceiling:

KEYSTROKE	DISPLAY
On/C On/C	0
1 4 Feet + 1 4 Feet +	28 FEET 0 INCH
1 6 Feet + 1 6 Feet x	60 FEET 0 INCH
8 Feet =	480 SQ FEET
Conv Flooring (Sheets)	4X8 15.00
Flooring (Sheets)	4X9 13.33
Flooring (Sheets)	4X10 12.00
Flooring (Sheets)	4X12 10.00

CUSTOM TILES: NUMBER OF – USING A NON–DEFAULT CUSTOM SIZE

Calculate the number of tiles needed if using a custom tile size of 4-1/2 inches x 4-1/2 inches to cover a floor that is 9 feet x 17 feet:

KEYSTROKE	DISPLAY
On/C On/C	0
4 Inch 1 / 2 x 4 Inch 1 / 2 =	Tile STORED 20.25 SQ INCH
Stor (Prefs) Custom Tile (Tile Size)	
9 Feet x 1 7 Feet =	153 SQ FEET
Custom Tile (Tile Size)	TILE 1088.00

TILES: NUMBER OF

Calculate the number of tiles needed to cover a floor measuring 9 feet x 11 feet. You want a grout width of 1/8 inch, but you're not sure of the tile size you're going to use. So, find the number of tiles in various sizes. Also, add a 10% waste allowance, in case you need extra tile.

KEYSTROKE	DISPLAY
On/C On/C	0
1 / 8 Stor (Prefs) Tile (Grout Width)	GRT STORED 0-1/8 INCH
9 Feet x 1 1 Feet =	99 SQ FEET
+ 1 0 %	108.9 SQ FEET
Tile (Grout Width)	TILE 26.94 (24 in)
Tile (Grout Width)	TILE 47.73 (18 in)
Tile (Grout Width)	TILE 60.31 (16 in)
Tile (Grout Width)	TILE 91.03 (13 in)

Continue to press the *Tile* key to scroll through the number of tiles needed for the following additional sizes: 12", 10", 8", 6", 4", 2", 1".

PAINT: GALLONS, QUARTS OR PINTS OF

Calculate the quarts, pints, or gallons of paint needed to cover a wall measuring 16 feet x 8 feet:

KEYSTROKE	DISPLAY
On/C On/C	0
1 6 Feet x (Clear All) / 8 (Bd Ft) Feet = (Tape)	128 SQ FEET
Paint (Coverage)	QT 1.46
Paint (Coverage)	PINT 2.93
Paint (Coverage)	GAL 0.37

Store a custom paint coverage per gallon by entering a custom value and pressing **Stor Paint** (e.g., **245 Feet Feet Stor Paint**). Perform a Clear All (**Conv x**) to return to the default setting.

BOARD FEET: LUMBER ESTIMATION

The default entry format for Board Feet is "inch x inch x feet" (e.g., **3 x 8 x 16** is 3 inches x 8 inches x 16 feet). You can also convert cubic values (volume) to Board Feet.

Enter board sizes and calculate Board Feet:

KEYSTROKE	DISPLAY
3 x (Clear All) 8 (Bd Ft) x (Clear All) 1 6 / Conv 8 (Bd Ft)	BDFT 32

Enter cubic feet and convert to Board Feet:

KEYSTROKE	DISPLAY
1 8 (Bd Ft) 0 (Cost) Feet Feet Feet	180 CU FEET
Conv 8 (Bd Ft)	BDFT 2160

PAINT: COST OF

Calculate the number of gallons of paint needed to cover 250 square feet. What will the total cost be at $16.98 per quart?

KEYSTROKE	DISPLAY
On/C **On/C**	0
1 **6** **•** **9** **8** **Stor** **0**	COST STORED 16.98 Per
2 **5** **0** **Feet** **Feet**	250 SQ FEET
Paint	QT 2.86
=	2.857143
Conv **0**	TTL$ 48.51

DEFAULT SETTINGS

Perform a Clear All (**Conv x**), to return the calculator to the following default settings:

STORED VALUE	DEFAULT VALUE
Block Area	128. SQ INCH
Block Length	16 INCH
Weight per Volume	1.5 Ton Per CU YD
Board On-Center	5-11/16 INCH
Post On-Center	8 FEET
Studs On-Center	16 INCH
Custom Tile Size	24 SQ INCH
Tile Grout Width	0 INCH
Paint Coverage Area	350 SQ FEET/GALLON
Unit Cost	$0.00

If you replace the calculator's batteries or perform a Full Reset* (press **Off**, hold down **x**, and Press **On/C**), the calculator will return to the following settings (in addition to those listed above):

PREFERENCE SETTINGS	DEFAULT VALUE
Fractional Resolution	1/16
Area Display	Standard
Volume Display	Standard
Meter Linear Display	0.000
Fractional Mode	Standard

* Pressing a small device (such as the end of a paperclip) into the Reset hole located above and left of the **Off** key will also perform a Full Reset.

SETTING CUSTOM FRACTIONAL RESOLUTION

Convert entered or calculated fractions to units other than the calculator default of 1/16th. Fractional resolution of 1/16th is permanently set in the default settings. See Default Settings for more information.

Add 36/64th to 1/64th and then convert the answer to other fractional resolutions:

KEYSTROKE	DISPLAY
On/C On/C	0
3 6 / 6 4	0-36/64 INCH
+ 1 / 6 4 =	0-37/64 INCH
Conv 1 (1/16)	0-9/16 INCH
Conv 2 (1/2)	0-1/2 INCH
Conv 3 (1/32)	0-19/32 INCH
Conv 4 (1/4)	0-1/2 INCH
Conv 6 (1/64)	0-37/64 INCH
Conv 8 (1/8)	0-5/8 INCH
On/C On/C	0

*Note: This is a temporary setting that does not affect the Permanent Fractional Resolution Setting. Press **On/C** to return the calculator to the permanently set fractional resolution.*

DISPLAY CAPACITY AND ERRORS

Accuracy/Display Capacity — The calculator has a twelve-digit display made up of eight digits (normal display) and four fractional digits. You may enter or calculate values up to 19,999,999.99. Each calculation is carried out internally to twelve digits. Most material calculations will result in an answer rounded up two places. Press the **=** key to see the non-rounded value.

Errors — When an incorrect entry is made, or the answer is beyond the range of the calculator, it will display an error. To clear an error condition, press the *On/C* button once. At this point, you must determine what caused the error and re-key the problem.

Error Codes:

DISPLAY	ERROR TYPE
OFLO	Overflow (too large)
MATH Error	Divide by 0
DIM Error	Dimension error
ENT Error	Entry error

Auto-Range — If an "overflow" is created because of an input or calculation with small units that are out of the standard seven-digit range of the display, the answer will be automatically expressed in the next larger units (instead of showing "OFLO") — e.g., 20,000,000 mm is shown as 20,000 m. Also applies to inches, feet and yards.

AUTO-SHUT OFF

Your calculator will shut itself off after about 8 to 12 minutes of inactivity.

BATTERY

This model uses one CR2032 battery (included). Should the calculator display become very dim, does not power on or remain on, replace the battery.

The calculator also has a Solar/Dual Power panel that will power the calculator when used in direct sunlight.

Note: Please use caution when disposing of old batteries, as it contains hazardous chemicals.

REPLACING THE BATTERY

While the calculator is off, turn the calculator over to remove the battery holder near the top center of the unit. Remove the old battery and slide a new battery into the holder. The positive side of the battery should be facing you as you insert the battery into the calculator. Replace the battery holder and power on the calculator.
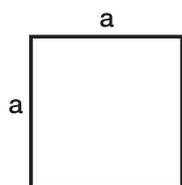
RESET

If your calculator should ever "lock up," perform a Reset by pressing a small device (such as the end of a paper clip) into the small hole located above and left of the *Off* key. This will perform a total reset of the calculator.
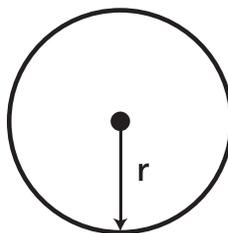
Area and Volume

AREA

Square

Area = a x a
or
a^2
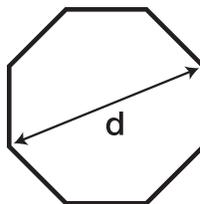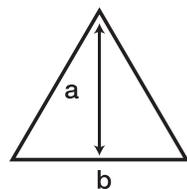
Circle

Circumference = $2\pi r$
Area = πr^2

Rectangle

Area = l x w

Octagon

Area = $(d/2)^2$ x 2.828

Triangle

Area = 1/2 x a x b

Ellipse
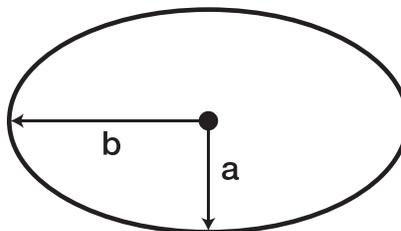
Area = πab

SURFACE AREA AND VOLUME

Cube
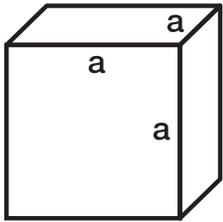
Surface Area = $6a^2$
Volume = a^3

Sphere
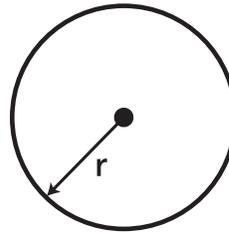
Surface Area = $4\pi r^2$
Volume = $4/3\pi r^3$

Rectangle
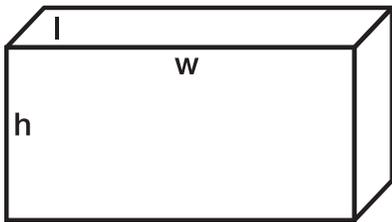
Surface Area = 2hw + 2hl + 2lw
Volume = l x w x h

Cylinder
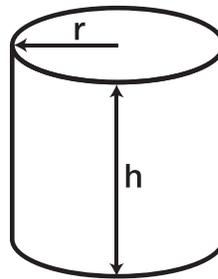
Surface Area = $2\pi rh + 2\pi r^2$
Volume = $\pi r^2 h$

Cone
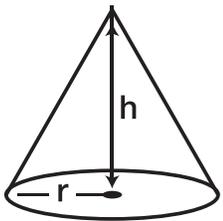
Surface Area = $\pi r \sqrt{r^2 + h^2}$
(+ πr^2 if you add the base)

Volume = $\dfrac{\pi r^2 h}{3}$

NOTES

PRODUCT WARRANTY

Johnson Level & Tool offers a one-year limited warranty on this product. You can obtain a copy of this warranty on our website or by contacting our customer service department. The limited warranty contains various limitations and exclusions.

Email: service@johnsonlevel.com
Tel: 888-953-8357
Online: www.johnsonlevel.com

PRODUCT REGISTRATION

Please register your product within 30 days of purchase. Registering ensures we have your information on file for warranty service even if you lose your receipt, and lets us contact you if there is ever a product recall. We will never sell your information and will only send you marketing information if you opt-in.

To register, scan or click:
www.johnsonlevel.com/register