The JOBBER 6 was developed especially for use by anyone connected with the building and construction industry.

**JOBBER 6 has “FIVE” different dimensional formats with instant conversion between all formats.**

1. Feet, inches & fractions
2. Decimal (of feet)
3. Inches & fractions
4. Decimal (of inches)
5. Metric (millimeters, meters)

All will work with the many built-in math programs.

This means that complex calculations can be made without the use of charts or tables, thus decreasing errors and increasing production.

The primary difference between the JOBBER 6 and other calculators is its use of its special keyboard of 0 to 15 instead of 0 to 9. This allows inches and fractions to be entered with a single keystroke each.

**NOTE THIS FEATURE**

A feature requested by many Jobber users is that they would like to be able to set the calculator to work only in 16th and not convert to lower case denominator fractions. This is accomplished by pressing the FIS key a second time. However, if you want to go to lower case fraction again, press the FIS key again, as it will switch back and forth.
6 – DIFFERENT MODES

KEYS TO PRESS

1. Feet, inches & fractions
2. Decimal (of feet)
3. Metric (millimeters)
4. Metric (meters)
5. Inches and fractions
6. Decimal inches

NOTE: When in the meter mode the "MM" in the display will be flashing.

Each Mode may be interchanged at any time. Thus, you can convert any (FIS) dimension to Decimal or Metric, and vice versa with a single keystroke.

With an incorrect entry or answer beyond the range of the calculator, the display will show “error.” To clean an error condition you must press the “CLR” button.

In the Decimal and Metric Modes, the display capacity is SEVEN digits, or “9999999.”

In the FIS Mode, the display capacity is EIGHT digits showing a maximum dimension of 99,999 feet, 11 inches and 15 sixteenths.

AUTOMATIC SHUT OFF

Your Calculator is designed to shut itself off after a few minutes of non-use. However, any values stored in the memories will be retained. Also any data in the triangle mode is retained and can be recalled by pressing the "INV" key first and then any one of the triangle keys.

KEY DEFINITIONS

ON

FIS This key turns the calculator on and activates the feet, inch, and fraction mode. It will also convert any displayed dimensions from other dimensional modes to the FIS mode.

CLR The CLEAR KEY - Press once clears the last entry and the display; press twice in succession clears all temporary registers.

Press "INV CLR" and it will backspace, deleting one keystroke at a time.

MEMORIES – JOBBER “6” has 6 Permanent Memories. Values stored in these memories are not lost when calculator goes off. One of these memories is separated from the other 5 memories.

DMS DMS MEM and RCL are the memory keys located to the right of the [15] and [12] keys. This memory is referred to as the Quick Memory because it requires only One Key In and One Key Out.

The other five memories work with the Memory Keys that are located on the left side of the [DEC] and [MM] keys. These memories require use of Two Keystrokes to store a value in them and Two Keystrokes to recall the stored value.

To Store the Value that is in the Display in these Memories:

MEM+ M1 M2 M3 M4 M5

To Recall the Stored Value in these Memories:

MEM− M1 M2 M3 M4 M5
When these memories have a stored value in them a small \( M_1 - M_2 - M_3 \) will light up in the display. MEM \( M_4 \) and \( M_5 \) will not light up in the display. You can press \( RCL \) \( M_4 \) or \( M_5 \) to see if they have a stored value in them.

To clear these memories – first clear the display with only zeros “0” showing in the display.

Then press \( MEM \) and \( 1 \) or \( 2 \) or \( 3 \) or \( 4 \) or \( 5 \) depending on the memory you wish to clear. Then the small \( M_1 - M_2 - M_3 \) in the display will go out, indicating the memory is clear. \( M_4 \) and \( M_5 \) are cleared in the same manner but have no display light to go out.

If a memory already has a value in it, but you wish to store a new value in it, it is not necessary to clear the memory before entering the new value. Just enter it as explained earlier. The new value will be stored and the previous value is cleared automatically.

**EXAMPLE** - Put 7'-103/4 in \( MEM-1 \)
Put tangent .645833 in \( MEM-3 \) for later use

**REMARKS**

<table>
<thead>
<tr>
<th>KEYSTROKES</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter 7'-103/4</td>
<td>( 7 - 10 - \frac{3}{4} )</td>
</tr>
<tr>
<td>Enter .645833</td>
<td>( 0.645833 )</td>
</tr>
<tr>
<td>Clear Display</td>
<td>( CLR 0. )</td>
</tr>
<tr>
<td>Go to FIS Mode</td>
<td>( FIS 0 - 0 - 0 )</td>
</tr>
<tr>
<td>Recall MEM-1</td>
<td>( 7 - 10 - \frac{3}{4} )</td>
</tr>
<tr>
<td>Recall MEM-3</td>
<td>( 7^{3/4} )</td>
</tr>
<tr>
<td>Go to DEC. Mode</td>
<td>( .645833 )</td>
</tr>
</tbody>
</table>

These same 5 Memories can also be used as Accumulative Memories.

By pressing the \( \text{INV} \) key first the \( MEM+ \) becomes **Memory Plus** (Adds to Memory).

The \( RCL \) becomes **Memory Minus** (Subtracts from Memory).

**EXAMPLE** Use the accumulative memories to total these dimensions: 4'-6 + 14'-8\( \frac{1}{2} \) + 10'-10 – 6'-1\( \frac{1}{2} \) and put them in \( MEM. 2 \).

**REMARKS**

<table>
<thead>
<tr>
<th>KEYSTROKES</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter 4'-6</td>
<td>4 6</td>
</tr>
<tr>
<td>Add 14'-8( \frac{1}{2} )</td>
<td>1</td>
</tr>
<tr>
<td>Add 10'-10</td>
<td>1</td>
</tr>
<tr>
<td>Subtract 6'-1( \frac{1}{2} )</td>
<td>6</td>
</tr>
<tr>
<td>Now find the Total</td>
<td>( RCL M_2 )</td>
</tr>
<tr>
<td>To Clear MEM-2</td>
<td>( CLR M_2 )</td>
</tr>
</tbody>
</table>

**NOTE:** Having values stored in the memories does not pull the batteries down.

**KEYSTROKES**

\( \text{SH} \) \( \text{INV} \) The **RED INVERT** key is a very important key as it has many functions when used in conjunction with other keys. (The invert key should be pressed first.)

It activates the 2nd function for most of the keys on the keyboard. When pressed two dashes between the fractions will start flashing.
KEY DEFINITIONS

DEC This key activates the Decimal of Feet Mode and converts any other displayed value to the equivalent in Decimal of Feet. **In this mode the calculator can be used as a standard calculator.**

DEC This key activates the Inch Mode and converts any other displayed dimension to inches and fractions or press [INCH] key a second time and go into the Decimal Inch Mode.

HIP This key will automatically calculate the Hip/Valley Pitch of a 45° Hip/Valley roof.
FIRST: Recall or put the actual roof pitch in the display. Then press the HIP key and the calculator will instantly display the calculated Tangent for pitch of the Hip/Valley beam.
This HIP Tangent can then be put in the PITCH for solving triangles. Then anything you desire to know can be calculated using the RISE RUN SLP keys.

NOTE: If you already had the actual roof pitch in the triangle mode PITCH key you may wish to recall and store it in one of the memories for easy recall and later use, before putting the HIP Tangent in the PITCH.

To find the plumb or vertical cut degree for the hip beam press [INV] TAN when the hip pitch is in the display.

[INV] TAN will convert the tangent value or pitch that is displayed to a decimal degree or angle.

[INV] ø CIRCLE MODE: These keys put the calculator in the CIRCLE MODE which activates all the parts for solving a circle and circle segments. As identified above, the orange keys.

[INV] + SEGMENTED RISE MODE: While in the Circle Mode with values in the circle keys. Pressing these keys will activate the segmented rise function which gives the rise at various points along the cord from the cord to the arc.

JACK RAFTER MODE: Jack lengths are automatically calculated for 45 degree roofs, starting from longest to shortest using any set on-center spacing, and based on the regular roof data that is in the triangle pitch, rise, run keys.

RAKE-UP MODE: This function automatically calculates the rise dimension along a triangle base at various set spaces, using the values that are stored in the pitch, rise, run triangle keys. This feature is ideal for calculating roof or grade rise.

RAKE-DOWN MODE: This function automatically finds the decreasing stud length or rise dimension in a raked wall or sloping plane at various set spaces, based on the values stored in the pitch, rise, run triangle keys.

CUBIC YARDS: These keys automatically convert the displayed calculation into cubic yards.

SQUARE YARDS: These keys automatically convert the displayed calculation into square yards.

REMAINDER: Displays the remainder value when a FIS dimension is divided by a whole number.

BOARD FEET: Converts the cubic value of material shown in the display to Board Feet.
Activates 1/x which divides the displayed value (x) into one.

PAPERLESS TAPE: Activates the paperless tape mode which allows the user to review the last 16 entries or sub-totals. A small "T" will show up in the display when activated. Then press the ÷ or + keys to scroll forward or backward through the data. If you find a dimension you want to use press the = key and proceed as normal.
KEY DEFINITIONS

DEGREES-MINUTES-SECONDS (INPUT): Allows the input of degrees, minutes and seconds into the calculator.

DEGREES-MINUTES-SECONDS: This function will convert a decimal degree that is shown in the display to degrees, minutes and seconds.

SINE: This function will calculate the sine of a degree or value displayed.

INV SINE: This function will calculate the smallest relative angle of the displayed sine value.

COSINE: This function will calculate the cosine of the displayed value.

INV COSINE: This function will calculate the smallest relative angle for the displayed cosine value.

AREA (for circles and triangles): When in the Circle Mode with a given diameter or radius, this function will give the area of the circle. Also, it will give the area for any triangle that is in the Triangle Mode.

SQUARE ROOT: This function will calculate the (square root) of the number shown in the display.

BACK SPACE: This function will delete the entries one keystroke at a time. (Unlike the clear function which deletes the entire entry.)

HIP/VALLEY BEAM LENGTH: With the roof dimension for the common rafters in the Triangle Mode, PITCH, RISE, RUN press these keys to find the developed length of the hip/val beam for a 45° roof system.

INV PITCH RECALLING TANGENT OR PITCH

The actual Tangent Pitch that the calculator is working within the triangle mode can be recalled by pressing \textit{INV PITCH} in the \textit{DEC} Mode or by converting the \textit{FIS PITCH} to the Decimal Mode by pressing the \textit{DEC} key.

\textbf{NOTE:} It is very important that you never try to recall the \textit{PITCH} without first pressing the \textit{INV} key, as you will erase or change its value to what is in the display, or unless you have already recalled one of the three triangle sides, by pressing \textit{INV RUN} or \textit{INV RIS} or \textit{INV SLP}.

\textit{x^2} Squares any number displayed.

\textit{\Pi} Displays the value of Pi truncated to the 7th digit.

TAN This key calculates the \textit{TANGENT} of the displayed degree or value.

DEG DEGREE

This key will input a degree into the triangle mode and automatically adjust the pitch accordingly, or will give the degree value for the pitch.

SPAC SET DEFAULT SPACE KEY

This key sets the default spacing dimension for the (Rake-Up) (Rake-Down) (Jack) and (Segmented Rise) functions. (The spacing must be set before these functions are activated.) After they are activated this key will let a special spacing be inserted one space at a time.

To recall or to check what default spacing dimension is stored in the calculator press \textit{INV SPAC}. 
How to enter 67' - 10 13/16'' in the Calculator.

**REMARKS**

**KEYS TO PRESS**

**DISPLAY READS**

<table>
<thead>
<tr>
<th>KEYS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>ON</td>
<td>Turn on Calc.</td>
</tr>
<tr>
<td>FIS</td>
<td>On Fis. Ft. Inch 16th</td>
</tr>
<tr>
<td>3/8</td>
<td>7/16 5/8 13/16</td>
</tr>
<tr>
<td>67</td>
<td>10 13/16</td>
</tr>
<tr>
<td>67 –</td>
<td>10 – 13/16</td>
</tr>
</tbody>
</table>

Once it is in the calculator’s display, it can be used as desired.
(Add - Sub. - Mult. - Divide - Etc.)

**INSTANT DIMENSIONAL UNIT CONVERSION**

Convert 7' - 10 3/8'' to other units.

**REMARKS**

**KEYSTROKES**

**DISPLAY READS**

<table>
<thead>
<tr>
<th>KEYS</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIS</td>
<td>Enter Fis. Dim.</td>
</tr>
<tr>
<td>7</td>
<td>10 6</td>
</tr>
<tr>
<td>7 –</td>
<td>10 3/8</td>
</tr>
<tr>
<td>INCH</td>
<td>Conv. to Inches</td>
</tr>
<tr>
<td>INCH</td>
<td>Conv. to Dec. Inches</td>
</tr>
<tr>
<td>DEC</td>
<td>Conv. to Dec. Feet</td>
</tr>
<tr>
<td>MM</td>
<td>Conv. to Millimeters</td>
</tr>
<tr>
<td>INV MM</td>
<td>Conv. to Meters</td>
</tr>
<tr>
<td>2397.125</td>
<td>2.397125</td>
</tr>
</tbody>
</table>
**EXAMPLES OF HOW TO ENTER DIMENSIONS IN THE FIS (FT., INCH, SIXTEENTH MODE.)**

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYS TO PRESS</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter 10' - 10(\frac{5}{8})&quot;</td>
<td>1 0 10 10</td>
<td>10 – 10 – 10/16</td>
</tr>
<tr>
<td>Enter 9' - 11(\frac{3}{4})&quot;</td>
<td>9 11 12</td>
<td>9 – 11 – 12/16</td>
</tr>
<tr>
<td>Enter 8(\frac{3}{8})&quot;</td>
<td>8 6</td>
<td>0 – 8 – 6/16</td>
</tr>
<tr>
<td>Enter 15/16&quot;</td>
<td>15</td>
<td>0 – 0 – 15/16</td>
</tr>
<tr>
<td>Enter 9' - 0&quot;</td>
<td>9 0 0</td>
<td>9 – 0 – 0/16</td>
</tr>
<tr>
<td>Enter 10&quot;</td>
<td>10 0</td>
<td>0 – 10 – 0/16</td>
</tr>
<tr>
<td>Enter 2' - 8&quot;</td>
<td>2 8 0</td>
<td>2 – 8 – 0/16</td>
</tr>
<tr>
<td>Enter 22' - 4(\frac{3}{4})&quot;</td>
<td>2 2 4 12</td>
<td>22 – 4 – 12/16</td>
</tr>
</tbody>
</table>

**NOTE:**
You must press the two additional "0"s to move the 9' over to the whole number position.

**NOTE:**
You must press one additional "0" to move the 10" or 1" over to the inch position.

Always press the numbers just as you would say them.

Twenty 2 two 2 feet four 4 3/4 inches and three quarters 12

When a fraction is first put in the calculator it will always read in the 16th. But as soon as any action key is pressed it will be changed to its lowest common denominator.

However, the display can be set to have the fractions remain in 16th by pressing the FIS key two times.

**ENTER DIMENSIONS JUST AS YOU WOULD SAY THEM**

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYS TO PRESS</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter 3' - 8&quot;</td>
<td>3 8 0</td>
<td>3 – 8 – 0</td>
</tr>
<tr>
<td>Enter 12' - 1(\frac{3}{4})&quot;</td>
<td>1 2 1 12</td>
<td>12 – 1 – 12/16</td>
</tr>
</tbody>
</table>

**NOTE:**
The 12 key could not be used here as this is a whole number of feet.

**NOTE:**
The key 12 is only used for 12/16" or 3/4" – no other function. (*Except in the inch mode it can be used for 12".)*

**TOTAL THESE DIMENSIONS**

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYS TO PRESS</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add 3' - 10(\frac{1}{4})&quot;</td>
<td>3 10 4 +</td>
<td>3 – 10 – 1/4</td>
</tr>
<tr>
<td>Add 7' - 6(\frac{1}{2})&quot;</td>
<td>7 6 8 +</td>
<td>11 – 4 – 3/4</td>
</tr>
<tr>
<td>Add 24' - 11(\frac{1}{8})&quot;</td>
<td>2 4 11 2 =</td>
<td>36 – 3 – 7/8</td>
</tr>
<tr>
<td>Subtract 8’ - 3(\frac{1}{2})&quot;</td>
<td>8 3 8 =</td>
<td>28 – 0 – 3/8</td>
</tr>
<tr>
<td>Multiply by 4 - spaces</td>
<td>x 4 0 0 =</td>
<td>112 – 1 – 1/2</td>
</tr>
<tr>
<td>Divide by 7 - spaces</td>
<td>÷ 7 0 0 =</td>
<td>16 – 0 – 3/16</td>
</tr>
</tbody>
</table>

**SHIFT DMS**

**INV**

**÷**

0 – 0 – 3/16

**+/−**

This key changes the sign of the displayed number.

Let’s say you have a dimension like 23' - 7\(\frac{3}{4}\)" in the display and you want to subtract it from a higher number, like 36' - 7\(\frac{1}{2}\)".

**DISPLAY READS**

Display reads
Change it to a minus
+/-

Subtract from 36' - 7\(\frac{1}{2}\)" + 3 6 7 8

Be sure to press the + first before entering the dimension.
KEYBOARD

These are the keys for automatically solving right triangles and segments of a circle.

NOTE: The Calculator is automatically in the triangle mode when it is turned on.

To enter the Circle Mode

Press \text{SHIFT} \text{ and } \varnothing

Then a small circle icon \([\varnothing]\) will appear in the left top corner of the display indicating you are in the Circle Mode.

To exit the Circle Mode repeat the process

Press \text{SHIFT} \text{ and } \varnothing

\text{SEGMENTS OF CIRCLE}

Press \text{INV} \text{ and } 0 and the small circle in the display will go out OR turn the calculator off.

Please note this \textbf{special feature for these keys}. They have a \textit{memory of their own} and can be recalled at any time even after the calculator is turned off.

They can be recalled by pressing \text{INV}key and the key for the part of the triangle or circle you wish to recall.

\textbf{Note This:} In the triangle mode it is very important that you \textbf{never go directly} back to the \text{PITCH} key without pressing \text{INV} \text{ PITCH}. This allows you to recall the pitch without it being altered by any value that may be in the display.

\textbf{METRIC INFO}

\textbf{METER} \text{MM} This key activates the \textbf{Metric Mode} and converts any other displayed dimension to the equivalent in Millimeters. When this mode is activated, the small icon \text{MET.MM} will appear in lower left corner of the display.

\text{INV} \text{MM} Will shift the metric mode to working in meters and the small \text{MET.MM} icon will flash on and off to indicate the calculator is working in meters.

The metric mode of \textbf{JOBBER 6} works in millimeters and meters, but these can very easily be converted to centimeters, by moving the decimal place.

One Meter \quad = \quad 1000 \text{ millimeters}

One Centimeter \quad = \quad 10 \text{ millimeters}

So, if your dim is in meters, simply multiply by 1000 or move the decimal point 3 places to the right for millimeters.

If your dim is in centimeters, simply multiply by 10, or move the decimal 1 place to the right for millimeters or 2 places to left for meters.

\textbf{EXAMPLE:}

\begin{tabular}{ccc}
\textbf{MILLIMETERS} & \textbf{METERS} & \textbf{CENTIMETERS} \\
1000 & 1 & 100 \\
3122 & 3.122 & 312.2 \\
41 & .041 & 4.1 \\
250 & .250 & 25
\end{tabular}
Given...Rise – 9’ – 11 3/8"
Run – 12’ – 8 3/4"
Find.....Slope
Pitch
Tangent
Convert Tangent to Degree:

REMARKS PRESS DISPLAY
Turn on Jobber    FIS 0 – 0 – 0
Enter Run        1 2 8 12 12 – 8 – 3/16
Tell Calc. this is Run    RUN 12 – 8 – 3/4
Enter Rise       9 11 6 9 – 11 – 3/16
Tell Calc. this is Rise    RIS 9 – 11 – 3/8
Ask for Slope    SLP 16 – 1 – 7/8
Ask for Pitch    PITCH 0 – 9 – 3/8
Convert Pitch to Dec. for Tangent    DEC .781505
Convert Tan. to Degree    DEG 38.00783

ANSWERS:
Slope = 16’ – 1 7/8
Pitch = 9 3/8 to 12"
Tangent = .7815056
Degree for Tangent = 38.00783

Given...Pitch = 6 15/16’ and Run = 20’ – 11 1/4"
Find.....Rise and Slope
Note....When the Pitch and one side is known, the other sides can be calculated with ease.

REMARKS PRESS DISPLAY
Turn on Jobber    FIS 0 – 0 – 0
Enter given Pitch of 6 15/16    PITCH 0 – 6 – 15/16
Tell Calc. this is Pitch    0 6 15
Enter given Run of 20’ 11 1/4”    RUN 20 – 11 – 4/16
Tell Calc. this is Run    2 0 11 4
Ask for length of Rise    RIS 12 – 1 – 1/4
Ask for length of Slope    SLP 24 – 2 – 3/16
Ask for Degree    DEG 30.03328
Ask for Area    INV 10 126.7189
Given...Rise — “A” = 10' – 8\(\frac{11}{16}\)" and Angle = 25 degrees
Find.....Pitch, Run and Slope

Note....When the angle, and one of the three sides of a right triangle are known, the length of each of the other two sides, and the pitch, can easily be calculated as follows:

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Put Jobber into</td>
<td>DEC</td>
<td>0</td>
</tr>
<tr>
<td>Dec. mode</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter given Degree</td>
<td>2 5</td>
<td>25</td>
</tr>
<tr>
<td>Tell Calc. this is</td>
<td>DEG</td>
<td>25</td>
</tr>
<tr>
<td>Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enter given Rise</td>
<td>1 0 8 11</td>
<td>10 – 8 – (\frac{11}{16})&quot;</td>
</tr>
<tr>
<td>Tell Calc. this is</td>
<td>RIS</td>
<td>10 – 8 – (\frac{11}{16})&quot;</td>
</tr>
<tr>
<td>Rise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask for length of Run</td>
<td>RUN</td>
<td>23 – 0 – 0</td>
</tr>
<tr>
<td>Ask for length of Slope</td>
<td>SLP</td>
<td>25 – 4 – (\frac{1}{2})</td>
</tr>
<tr>
<td>Ask for Pitch</td>
<td>PITCH</td>
<td>0 – 5 – (\frac{5}{8})</td>
</tr>
</tbody>
</table>

**ANSWERS:**
- Pitch = 5\(\frac{5}{8}\) to 12"
- Run = 23' – 0
- Slope = 25' – 4\(\frac{1}{2}\)"
Given...Run = 6029 mm and Rise = 4522
Find.....Tangent (in Metric Tangent is Pitch) (Find Rise based on a Run of 250 mm)
Find.....Slope
Also Convert Metric Tangent to FIS Pitch

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Switch to Metric Mode</td>
<td>MET</td>
<td>0</td>
</tr>
<tr>
<td>Enter Given Run</td>
<td>6 0 2 9</td>
<td>6029</td>
</tr>
<tr>
<td>Tell Calc. this is Run</td>
<td>RUN</td>
<td>6029</td>
</tr>
<tr>
<td>Enter Given Rise</td>
<td>4 5 2 2</td>
<td>4522</td>
</tr>
<tr>
<td>Tell Calc. this is Rise</td>
<td>RIS</td>
<td>4522</td>
</tr>
<tr>
<td>Ask for Slope</td>
<td>SLP</td>
<td>7536.4</td>
</tr>
<tr>
<td>Ask for Tangent</td>
<td>PITCH</td>
<td>.750041</td>
</tr>
<tr>
<td>Ask for Rise based on 250 mm Run</td>
<td>2 5 0</td>
<td>250</td>
</tr>
<tr>
<td>Ask for Rise</td>
<td>RIS</td>
<td>187.5104</td>
</tr>
<tr>
<td>If desired, now convert Metric Tangent to FIS (Pitch)</td>
<td>FIS</td>
<td>0 – 7 – ³/₈</td>
</tr>
<tr>
<td>Go back to FIS mode</td>
<td>INV PITCH</td>
<td>0 – 9 – 0</td>
</tr>
</tbody>
</table>

**ANSWER:** Pitch in FIS = 9" to 12" (21)

Given...A Pitch of 156 mm, Rise to 250 mm Run
Given...Slope dim of 5761 mm
Find.....Run
Find.....Rise
Convert Metric Bevel to FIS

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Switch to Metric Mode</td>
<td>MET</td>
<td>0</td>
</tr>
<tr>
<td>Enter 250 mm</td>
<td>2 5 0</td>
<td>250</td>
</tr>
<tr>
<td>Tell Calc. this is Run</td>
<td>RUN</td>
<td>250</td>
</tr>
<tr>
<td>Enter 156 mm</td>
<td>1 5 6</td>
<td>156</td>
</tr>
<tr>
<td>Tell Calc. this is Rise</td>
<td>RIS</td>
<td>156</td>
</tr>
<tr>
<td>Ask for Tangent</td>
<td>PITCH</td>
<td>0.624</td>
</tr>
<tr>
<td>Now enter Slope</td>
<td>5 7 6 1</td>
<td>5761</td>
</tr>
<tr>
<td>Tell Calc. this is Slope</td>
<td>SLP</td>
<td>5761</td>
</tr>
<tr>
<td>Ask for Run</td>
<td>RUN</td>
<td>4887.514</td>
</tr>
<tr>
<td>Ask for Rise</td>
<td>RIS</td>
<td>3049.808</td>
</tr>
<tr>
<td>To convert Metric Pitch to FIS Pitch, go back to FIS mode</td>
<td>FIS</td>
<td>10 – 0 – 1/₁₆</td>
</tr>
<tr>
<td>Tell Calc. to recall the Pitch</td>
<td>INV PITCH</td>
<td>0 – 7 – 1/₂</td>
</tr>
</tbody>
</table>

**ANSWER:** Pitch in FIS = 7½" to 12" (22)
HOW TO ENTER OR CONVERT TO
DEGREES – MINUTES – SECONDS

To enter a DEG. – MIN – SEC
Press: \textbf{INV} – \textbf{MEM}

To convert a decimal degree that is shown in display to DEG. – MIN – SEC
Press: \textbf{INV} – \textbf{RCL}

Example of How to Enter a D.M.S.
Enter $37^\circ 22' 25''$

Press: $3 \ 7 \ ullet \ 2 \ 2 \ ullet \ 2 \ 5$

Display Reads $37.37361$

Now Convert to Decimal Degree Press \textbf{DEC} 37.37361

Now Ask for Tangent Press \textbf{TAN} \ 0.763828

The tangent can be put in \textbf{PITCH} for solving triangles.

\textbf{NOTE:} In the Circle Mode, DMS can be put directly into the degree key \textbf{DEG} without converting to decimal equivalent.

\textbf{Decimal Equivalent of DMS can be converted by pressing} \textbf{INV} \textbf{RCL}

\textbf{Example:} Convert $41.2876^\circ$ to D.M.S. that is in the display.

Press: $4 \ 1 \ ullet \ 7 \ ullet \ 1 \ 5$

Display Reads $41.17.15$

\textbf{How to convert a Pitch of 6$\frac{3}{4}''$ to D.M.S.}

\textbf{Remarks}

Convert to Dec. Deg. \textbf{DEG} \ 29.35775

Now convert to D.M.S. \textbf{INV} \textbf{RCL} \ 29.21.28 or $29^\circ 21' 28''$

SQUARING UP A BUILDING OR ANY PROJECT

You want to square up a building for which you know the Dims. of two sides. What should the Diagonal Dim. be?

\begin{tabular}{|l|l|l|}
\hline
\textbf{REMARKS} & \textbf{PRESS} & \textbf{DISPLAY} \\
\hline
Turn on Jobber \textbf{FIS} & 0 – 0 – 0 \\
Ent. Run Dim. \textbf{4 3 8 8} & \textbf{RUN} \ 43 – 8 – $\frac{1}{2}$ \\
Tell Calc. this is Run \textbf{RUN} & \ 43 – 8 – $\frac{1}{2}$ \\
Ent. Rise Dim. \textbf{2 3 6 0} & \textbf{RIS} \ 23 – 6 – 0 \\
Tell Calc. this is Rise \textbf{RIS} & \ 23 – 6 – 0 \\
Ask for Slope Dim \textbf{SLP} & \ 49 – 7 – $\frac{1}{2}$ \\
\hline
\end{tabular}

So the Diagonal Dim. is $49' – 7\frac{1}{2}''$
ESTIMATING BRICK

How many standard bricks are required for a wall 42'-8" long x 9'-0" high.

Brick Size (3-3/4" x 8")

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYSTROKES</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find area of brick</td>
<td>3 12 x 8 0 =</td>
<td>0.208333</td>
</tr>
<tr>
<td>Store in MEM</td>
<td>MEM</td>
<td>0.208333</td>
</tr>
<tr>
<td>Find sq. ft. in the wall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(go back to FIS)</td>
<td>FIS 4 2 8 0 x 9 0 0 =</td>
<td>384 – 00/16</td>
</tr>
<tr>
<td>Divide by brick area</td>
<td>÷ RCL =</td>
<td>1843.2 (bricks)</td>
</tr>
<tr>
<td>Add 5% for waste</td>
<td>x 1 • 0 5 =</td>
<td>1935.36 (bricks)</td>
</tr>
</tbody>
</table>

PERCENT OF SLOPE

Convert 12.5% of Slope to Pitch.
We have a ramp sloping at 12.5% - what is the pitch per foot?

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Go to Dec. Mode</td>
<td>DEC</td>
<td>0</td>
</tr>
<tr>
<td>Enter 12.5%</td>
<td>• 1 2 5</td>
<td>.125</td>
</tr>
<tr>
<td>Convert to FIS Mode</td>
<td>FIS</td>
<td>0 – 1 1/2</td>
</tr>
</tbody>
</table>

12.5% Slope = 1 1/2" to 12" (Slope Pitch)

To convert 1 1/2" Pitch back to percent (%) of Slope, simply press [DEC] key.

CALCULATING BOARD / FEET FOR LUMBER

Board Feet / Lumber calculations can easily be performed with the JOBBER “6.”

**Example:**
Calculate the board feet in a (2 x 4) x 14' long
Go to DEC mode, multiply 2 (x) 4 (x) 14 (=) 112
Ask for Board Feet press INV +/- (9.3333 board ft.)

**Example:**
Calculate the board ft. in 7 (2 x 12) x 18' long.
2 x 12 (x) 18 (x) 7 = 3024
Convert to Board Feet press INV +/- (252 board ft.)
You have 160 Lin. Ft. of concrete footing. How many cubic yards of concrete is needed?

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Enter 8”</td>
<td>8 0</td>
<td>0 – 8 – 0</td>
</tr>
<tr>
<td>Multiply by 1’ – 4</td>
<td>X 1 4 0</td>
<td>1 – 4 – 0</td>
</tr>
<tr>
<td>Equals</td>
<td></td>
<td>0.88889</td>
</tr>
<tr>
<td>Multiply by 160’</td>
<td>X 1 6 0 =</td>
<td>142.2222 (cubic feet)</td>
</tr>
<tr>
<td>Conv. to Cubic Yards</td>
<td>INV 15</td>
<td>5.26749 (cubic yards)</td>
</tr>
</tbody>
</table>

NOTE: There are 27 Cubic Feet of concrete in one cubic yard. How many cubic yards of concrete are required to pour this slab.

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turn on Jobber</td>
<td>FIS</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Enter 15’ – 10 1/2”</td>
<td>1 5 10 8</td>
<td>15 – 10 – 8/16</td>
</tr>
<tr>
<td>Multiply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>by 12’ – 9 1/4”</td>
<td>X 1 2 9 4</td>
<td>12 – 9 – 4/16</td>
</tr>
<tr>
<td>Equals</td>
<td></td>
<td>202.737</td>
</tr>
<tr>
<td>Multiply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Convert to FIS</td>
<td>FIS</td>
<td>202 – 8 – 7/8</td>
</tr>
<tr>
<td>Enter 4” thick slab</td>
<td>4 0</td>
<td>0 – 4 – 0</td>
</tr>
<tr>
<td>Equals Cubic Feet</td>
<td></td>
<td>67.57899</td>
</tr>
<tr>
<td>Conv. to Cubic Yards</td>
<td>INV 15</td>
<td>2.502958 (cubic yards)</td>
</tr>
<tr>
<td>Cubic Yards of concrete</td>
<td></td>
<td>2.502926</td>
</tr>
</tbody>
</table>
CALCULATING CONCRETE VOLUME

PART A
15'-6"
21'-0"
PART B
23'-0"
24'-0"
PART C
27'-2"
19'-2"
64'-2"

You are pouring this odd shaped slab 5" deep. How many yards of concrete are required?

Find area for each part and store in (MEM +) M3.

REMARKS  KEYSTROKES  DISPLAY READS

Find area
Part A  \[1560 \times 2100 = 325 - 60/16\]

Store in (M + M3)  \[\text{INV MEM} 3\]

Find area
Part B  \[2300 \times 2400 = 552 - 00/16\]

Store in (M + M3)  \[\text{INV MEM} 3\]

Find area
Part C  \[2720 \times 1920 = 520.6944\]

Store in (M + M3)  \[\text{INV MEM} 3\]

Recall total Sq. Ft.  \[\text{RCL M3} 3\]

Multiply by 5" Deep  \[\times \text{FIS 50} = \text{582.581} \text{ (cubic ft.)}\]

Convert to Cubic Yards  \[\text{INV 15} \text{ 21.57707} \text{ (cubic yards)}\]

FORMULA: Volume = Radius\(^2 \times \pi \times \text{Height}\)
OFF-SET BRACING

FORMULA “A” (FIND C DIM)

\[
C = \frac{(B)}{(B) + (D)} \times (E)
\]

\[C = 12' - 9\frac{5}{16}"
\]

ANSWER: C = 12' – 9\frac{5}{16}"

FORMULA “B” (FIND A DIM)

\[
A = \frac{(D)}{(D) + (B)} \times (G)
\]

\[A = 11' - 7\frac{7}{16}"
\]

ANSWER: A = 11' – 7\frac{7}{16}"

SEE FORMULAS “A” and “B” on following page

FORMULA “A”

REMARKS | PRESS | DISPLAY
--- | --- | ---
ADD (B + D) | 1 7 6 4 + 1 6 5 4 = | 33 – 11 – \(\frac{1}{2}\)
Store in Mem. “#1” | MEM 1 | 33 – 11 – \(\frac{1}{2}\)
Enter (B) | 1 7 6 4 | 17 – 6 – \(\frac{4}{16}\)
Divide | ÷ | 17 – 6 – \(\frac{1}{4}\)
Recall Mem. “#1” | RCL 1 | 33 – 11 – \(\frac{1}{2}\)
Equals | = | .515951
Multiply | X | .515951
Back to FIS Mode | FIS | 0 – 6 – \(\frac{3}{16}\)
Enter “E” | 2 4 9 3 | 24 – 9 – \(\frac{3}{16}\)
Equals | = | 12.77785
Back to FIS Mode for Dim. “C” | FIS | 24 – 9 – \(\frac{5}{16}\)

FORMULA “B”

REMARKS | PRESS | DISPLAY
--- | --- | ---
Enter (D) | 1 6 5 4 | 16 – 5 – \(\frac{4}{16}\)
Divide | ÷ | 16 – 5 – \(\frac{1}{4}\)
Recall Mem. “#1” | RCL 1 | 33 – 11 – \(\frac{1}{2}\)
Equals | = | .484049
Multiply | X | .484049
Back to FIS Mode | FIS | 0 – 5 – \(\frac{13}{16}\)
Enter “G” | 2 4 0 2 | 24 – 0 – \(\frac{2}{16}\)
Equals | = | 11.62222
Back to FIS Mode for Dim. “A” | FIS | 11 – 7 – \(\frac{7}{16}\)
OBLIQUE TRIANGLES

1. Oblique triangles can be solved if you know 2 angles and one side, or
2. If you know 2 sides and one angle.

FORMULA: \( \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C} \)

The keystroke procedures presented here are not unique. There are many possible solutions to each problem. Until you become comfortable with a particular formula you may find it valuable to draw a diagram and label your results. Once you have become familiar with the formula and the JOBBER 6 you will no doubt develop your own keystroke procedure that works well for you.

OBLIQUE TRIANGLES

Example #1
Formula: \( \frac{a}{\sin A} \times (\sin B) = b \)
Known: Angle “A” = 44°, Angle “B” = 65° Side “a” = 12’ - 7 1/2

Find Side (b)

\[ \text{REMARKS} \]

PRESS | DISPLAY
--- | ---
Turn on JOBBER | FIS | 0 – 0 – 0
Go to Dec Mode | DEC | 0.
Enter Angle “A” (44°) | 4 / 4 SIN | 44.
Ask for Sine | INV | 6.694658
Store in Mem. #1 | MEM | 0.694658
Convert to FIS Mode | FIS | 0 – 8 – 5/16
Enter Side “a” | 1 | 2 | 7 | 8 | 12 – 7 – 8/16
Divide by RCL Mem. #1 | + RCL | 1 | = | 18.1744
Store in Mem. #2 | MEM | 2 | SIN | 18.1744
Enter Sin. of Angle “B” | 6 | 5 | INV | 6 | .906308
Mult. by RCL Mem. #2 | X RCL | 2 | = | 16.4716
Convert to FIS Mode | FIS | 16 – 5 – 11/16

\[ \text{ANSWER: Side “b” = 16’ – 5 11/16} \]

OBLIQUE TRIANGLES

Example #2
Formula: \( \sin B = \frac{(a \div \sin A)}{b} \)
Given: Side “a” = 12’ - 7 1/2
Find: Degree “B”

Side “b” = 16’ - 5 11/16
Find: Angle “A” = 44

\[ \text{REMARKS} \]

PRESS | DISPLAY
--- | ---
Turn on JOBBER | FIS | 0 – 0 – 0
Go to Dec Mode | DEC | 0.
Enter Angle “A” | 4 | 4 | SIN | 44.
Ask for Sine | INV | 6 | .694658
Store in Mem. #1 | MEM | 0.694658
Convert to FIS Mode | FIS | 0 – 8 – 5/16
Enter Side “a” | 1 | 2 | 7 | 8 | 12 – 7 – 8/16
Divide by RCL Mem. #1 | + RCL | 1 | = | 18.1744
Store in Mem. #2 | MEM | 2 | 18.1744
Go back to FIS Mode | FIS | 18 – 2 – 1/16
Enter Side "b" | 1 | 6 | 5 | 11 | 16 – 5 – 11/16
Divide by RCL Mem. #2 | + RCL | 2 | = | .906437
Invert Sine | INV | 7 | 65.01759

\[ \text{ANSWER: Side “B” = 65 Degrees} \]
NOTE: If during the solving process you make a mistake or want to start over, press the CLR key, then reactivate the RAKE-UP function by pressing the INV keys to start the solving process over again, or to review the answers activate the TAPE function by pressing INV keys then the key, to review the answers in reverse. This same process works for JACK, RAKE-UP and RAKE-DOWN and SEGMENTED RISE functions.

RAKE-UP KEY FUNCTION

This function will solve the increasing length for studs in a raked wall (or give the rise dimensions in any right triangle situation) using the stored values in the triangle keys, RISE, RUN, SLOPE, PITCH, plus the SPAC key.

The SPAC key is used for setting the DEFAULT spacing. But a SPECIAL spacing can be substituted at any time.

Once all the values are in place press the key to solve for each rise dimension.

Figure #1
First put values in the triangle function keys if they are not already there.

**REMARKS**

**KEYS TO PRESS**

**DISPLAY READS**

Enter the PITCH

Enter the RUN

Enter Default Spacing

Activate Rake-Up Function

Ask for DIM. A

Ask for DIM. B

Ask for DIM. C

Ask for DIM. D

Enter Special Space

Ask for DIM. E

Enter Special Space

Ask for DIM. F

Ask for DIM. G

7 – \( \frac{8}{16} \)

10 – 8 – 0

1 – 4 – 0

0 – 0 – 0

0 – 10 – 0

1 – 8 – 0

2 – 6 – 0

3 – 4 – 0

1 – 6 – 0

4 – 3 – \( \frac{1}{4} \)

2 – 6 – 0

5 – 10 – 0

6 – 8 – 0
This function can be used to calculate dimensions for sloping grades or sloping roofs. It is excellent for finding elevations at column lines or various other points for sloping structures.

Figure #2

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYS TO PRESS</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter RUN</td>
<td>8 9 8 0</td>
<td>RUN</td>
</tr>
<tr>
<td>Enter RISE</td>
<td>5 7 4</td>
<td>RISE</td>
</tr>
<tr>
<td>Default Spacing</td>
<td>1 8 10 0</td>
<td>SPAC</td>
</tr>
<tr>
<td>Activate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rake-Up Function</td>
<td>INV</td>
<td>13</td>
</tr>
<tr>
<td>Enter Special Spacing</td>
<td>2 2 0 0</td>
<td>SPAC</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>A</td>
<td>+</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>B</td>
<td>+</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>C</td>
<td>+</td>
</tr>
<tr>
<td>Enter Special Spacing</td>
<td>1 1 2 0</td>
<td></td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>D</td>
<td>+</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>E</td>
<td>+</td>
</tr>
</tbody>
</table>

**NOTE:** If you are working with an exact PITCH or DEGREE or TANGENT, put it in the calculator and the RUN or RISE can be set for any long distance like 100 feet. Then rise calculations can be made at various points along the base using the PITCH, DEGREE or TANGENT and the space key.

**NOTE:** To recall or check the stored dimension that is in the default spacing press INV SPAC.
RAKE-DOWN KEY FUNCTION

The **RAKE-DOWN** mode works very similar to the **RAKE-UP** mode with the exception it starts with the high side of the triangle and works down. It is excellent for finding the decreasing stud lengths in a raked wall.

**Figure #3**

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>KEYS TO PRESS</th>
<th>DISPLAY READS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter</td>
<td>TRIANGLE RUN 1 1 2 0 RUN</td>
<td>11 – 2 – 0</td>
</tr>
<tr>
<td>Enter</td>
<td>ROOF PITCH 5 8 PITCH</td>
<td>58/16</td>
</tr>
<tr>
<td>Set</td>
<td>Default Spacing 1 6 0 SPAC</td>
<td>1 – 6 – 0</td>
</tr>
<tr>
<td>Activate</td>
<td>Rake-Down Function INV 14 RK-DN</td>
<td>5 – 1 – 7/16</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>A +</td>
<td>4 – 5 – 13/16</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>B +</td>
<td>3 – 8 – 15/16</td>
</tr>
<tr>
<td>Enter Special Space 1 10 0 SPAC</td>
<td>1 – 10 – 0</td>
<td></td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>C +</td>
<td>2 – 10 – 13/16</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>D +</td>
<td>2 – 2 – 9/16</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>E +</td>
<td>1 – 6 – 5/16</td>
</tr>
<tr>
<td>Enter</td>
<td>Special Spacing 2 0 0 SPAC</td>
<td>2 – 0 – 0</td>
</tr>
<tr>
<td>Ask for DIM.</td>
<td>F +</td>
<td>7 – 5/16</td>
</tr>
</tbody>
</table>
Solve circles instantly in the Circle Mode!

Circle Solution Data
- \( \text{Radius}^2 \times \pi = \text{Area of Circle} \)
- Diameter \( \times \pi = \text{Circumference for (360°)} \)
- Radius \( \times \pi = \text{Arc for } \frac{1}{2} \text{ circumference or (180°)} \)
- Circumference divided by 360° = (Arc for one degree)
- \( \frac{1}{2} \) of circumference divided by 180 = (Arc for one degree)
- Angle degree multiplied by arc for one degree equals (arc for said degree)

To activate the Circle Mode press

INV 0

A small circle \( \varnothing \) will appear in the upper right corner of the display indicating that the calculator is in the circular mode.

To exit the Circle Mode, press

* SHIFT \( \varnothing \)

or turn the calculator off.

If you know these two parts of the circle, the calculator will tell you the rest.

- Cord and M.O. (Middle Ordinate)
- Cord and Degree
- Cord and Radius or Diameter
- Radius and Degree
- Radius and Middle Ordinate
- Radius and Arc
- Middle Ordinate and Degree
- Circumference - One keystroke gives you the radius.
- Radius – One keystroke gives you the circumference.

Segment of Circle Example #1
Given Cord = 10' – 51/2"
Given M.O. = 1' – 2"
Find Radius ?
Find Degree ?
Find Area in Circle ?

<table>
<thead>
<tr>
<th>REMARKS</th>
<th>PRESS</th>
<th>DISPLAY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter Circle Mode</td>
<td>INV 0</td>
<td>0 – 0 – 0</td>
</tr>
<tr>
<td>Enter Cord</td>
<td>1 0 5 8</td>
<td>10 – 5 – 8/16</td>
</tr>
<tr>
<td>Tell Calc. this is Cord</td>
<td>CORD RIS</td>
<td>10 – 5 – 1/2</td>
</tr>
<tr>
<td>Enter M.O.</td>
<td>1 2 0</td>
<td>1 – 2 – 0</td>
</tr>
<tr>
<td>Tell Calc. this is M.O</td>
<td>SLP RAD</td>
<td>1 – 2 – 0</td>
</tr>
<tr>
<td>Ask for Radius</td>
<td>PITCH</td>
<td>12 – 3 – 5/8</td>
</tr>
<tr>
<td>Ask for Arc</td>
<td>ARC X²</td>
<td>10 – 9 – 5/8</td>
</tr>
<tr>
<td>Ask for Degree</td>
<td>RUN</td>
<td>50.30855</td>
</tr>
<tr>
<td>Convert Degrees to DMS</td>
<td>SHIFT DMS</td>
<td>50.18',31&quot;</td>
</tr>
<tr>
<td>Ask for Area of Circle</td>
<td>SHIFT AREA 10</td>
<td>475.467 sq. ft.</td>
</tr>
</tbody>
</table>
STILL IN CIRCLE MODE.

Example #2
Given Radius = 7' – 10 3/4
Given Degree = 57.25°
Find Arc
Find Cord
Find M O
Find Area of Circle

REMARKS | PRESS | DISPLAY
--- | --- | ---
Enter Radius | 7 10 12 | 7 – 10 12/16
Tell Calc. this is Radius | RAD | 7 – 10 3/4
Go to Dec. Mode | DEC | 7.895833
Enter Degree | 57.25 | 57.25
Tell Calc. this is Degree | RUN | 57.25
Ask for Arc | ARC | 7.889525
Convert to FIS | FIS | 7 – 10 11/16
Ask for Cord | CORD | 7 – 6 13/16
Ask for M O | M O | 0 – 11 9/16
Ask for CIR | CIR | AREA
Ask for Area of Circle | INV 10 | 195.86 sq. ft.

BOLT CIRCLES CAN BE SOLVED IN SECONDS
KNOWN 10" DIA. 7 – HOLE BOLT PATTERN

REMARKS | KEYS TO PRESS | DISPLAY READS
--- | --- | ---
Go to Circle Mode | INV 0 | 0 – 0 0/16
Go to Dec. Inch Mode | INCH INCH | 0.
Enter DIAMETER | DIA 10 | 10.
Divide 360° DEG. by 7 spaces | 360 ÷ 7 = | 51.42857°
Tell Calc. this is DEG | RUN | 51.42857°
Ask for ARC | ARC x2 | 4.48799"
Ask for CORD | RISE | 4.338837"
Ask for M O | SLP | .499156"
Ask for CIR | CIR | 31.41593"
Solve Circle using the Segmented Rise Function

Know – Radius 12'-8" 1/4”
Know – Cord 23'-6"

REMARKS          KEYSTROKES          DISPLAY READS

Activate Circle Mode  INV  0              0 – 0 – 0/16
Enter Radius  1  2  8  4             PITCH 12 – 8 – 1/4
Enter Cord  2  3  6  0             RISE 23 – 6 – 0/16
Set Default Space  1  10  0             SPAC 1 – 10 – 0
Activate Rise Function  INV  7              7 – 10 – 13/16
Ask for DIM.  A  +              7 – 9 – 3/16
Ask for DIM.  B  +              7 – 4 – 5/16
Ask for DIM.  C  +              6 – 7 – 3/4
Enter Spec. Space  2  4  0             SPAC 2 – 4 – 0/16
Ask for DIM.  D  +              5 – 2 – 5/16
Enter Spec. Space  2  1  0             SPAC 2 – 1 – 0/16

FIND THE DEGREE FOR MITER CUTS
AND MITER PITCH A

Enter Pitch  9  6             PITCH 0 – 93/8
Convert to Degree  DEG              37.99873
Divide Deg. by 2  +  2  =              18.99937
This is the Deg. for miter cut.
Ask for Tan. of Degree  TAN              .344315
Conv. Tan. to FIS.  FIS              0 – 4 1/8
This is miter Pitch  A
Solve One/Half of a Circle using the Inch Mode
\* 10" DEFAULT SPACING  • – SPECIAL SPACING
Known – Radius 60"  Known – Degree 180°

REMARKS

KEYSTROKES

DISPLAY READS

Go to Circle Mode

INV 0

0 – 0 – 0

Go to Dec. Inch Mode

INCH INCH

0.

Enter Radius 60"

6 0 PITCH

60.

Enter 180 Degrees

180 RUN

180.

Set Default Space

10 SPAC

10.

Convert to

Inch/Fraction Mode

INCH

100/16

Activate Solver Mode

INV *

600/16

Ask for DIM. A

+ 593/16

Ask for DIM. B

+ 569/16

Ask for DIM. C

+ 5115/16

Enter Special Space

140 SPAC

140/16

Ask for DIM. D

+ 4013/16

Ask for DIM. E

+ 261/8


Roof rafters and trusses, even Hip and Valley, can be figured instantly with JOBBER “6”
The roof we are working on has a $5\frac{1}{2}$ inch pitch with a span of 24'-0", as indicated in the sketch below. Find the common rafter length, hip pitch, hip length and jack lengths.

To find the degree cut for the common rafters, recall the $5\frac{1}{2}$ pitch and press the [INV TAN] keys

$5\frac{1}{2}$ PITCH = 24.62356 DEGREES.

To find the exact degree cut for the hip beam, recall the $5\frac{1}{2}$" roof pitch to the display by pressing [INV PITCH] then press [HIP]. The display will read .324091 which is the tangent for the hip. Now press [INV TAN] and the hip degree cut will be displayed 17.95702 DEGREES.
**SOLVE THE 45° HIP ROOF**

With the common roof dimension in the triangle mode keys (5 1/2” Pitch) (14'-0 Run) (6'-5 Rise) (15'-4 13/16 Slope).

Find the hip beam Pitch, Length and Angle Cut.

**REMARKS**

**KEYSTROKES**

**DISPLAY READS**

Recall the roof pitch to the display

INV PITCH 0 – 5 \( \frac{1}{2} \)

Ask for Hip Tangent

HIP .324091

Convert to FIS for Pitch

FIS 0 – 3 \( \frac{7}{8} \)

Ask for Angle Cut for Beam Ends

INV TAN 17.89613°

Go back to FIS Mode

FIS 17 – 10 \( \frac{3}{4} \)

Ask for Hip Beam developed length

INV LGTH 20 – 9 \( \frac{3}{4} \)

**SOLVING FOR IRREGULAR (KNOWN 45°) HIP**

First find the diagonal (horiz. base dim.)

**REMARKS**

**KEYSTROKES**

**DISPLAY READS**

Enter known bldg. run

1 6 6 0 RUN 16 – 6 \( \frac{0}{16} \)

Enter known bldg. rise

1 4 0 0 RISE 14 – 0 \( \frac{0}{16} \)

Ask for the horiz. slope

SLP 21 – 7 \( \frac{11}{16} \)

Now put this slope Dim in the Run (to do this press the = key first)

= RUN 21 – 7 \( \frac{11}{16} \)

Now enter the Roof Rise

6 5 0 RIS 6 – 5 \( \frac{0}{16} \)

Ask for the Hip Pitch

PITCH 0 – 3 \( \frac{9}{16} \)

Ask for the Hip Beam Length

SLP 22 – 6 \( \frac{7}{8} \)
Find bearing depth for TRUSS #1 and #2 at wall line.

Bearing depth for Truss #1 = 6\(1/8\)
Bearing depth for Truss #2 = 1 – 3\(1/8\)
HOW TO CALCULATE A STAIR

Start with the known of 9' - 8" Floor to Floor Dimension

RISERS

We must first decide what is the maximum riser height we want to use or that the code will allow.

In many areas 7" is the max.

So now we must determine how many risers are required. By dividing 7" into 9' - 8".

Enter 9' – 8" in display  \( 9 \, 8 \, 0 \)

Divide by 7" \( ÷ \, 7 \, 0 \, 0 \) = 16.57143

The answer is over 16, so that means in order for the risers not to exceed 7" we must have 17 risers.

To determine exactly how high each riser will be, we divide the 17 risers into the 9' – 8" fl. to fl. dim.

Put 9' – 8" in display

\[ 9 \, 8 \, 0 \, ÷ \, 1 \, 7 \, 0 \, 0 = 6 \, \frac{13}{16} \]

height for each riser.

But we must check and see if there was a remainder. By pressing \( \text{INV} \, ÷ \, 0 \) – 0 – 3/16 (there was a \( \frac{3}{16} \) remainder that must be taken into account).

We will make the 1st riser \( 6 \, \frac{13}{16} \) and distribute the \( \frac{3}{16} \) remainder among the other 16 risers.

For the total height of the other 16 risers we subtract \( 6 \, \frac{13}{16} \) from 9' – 8".

\[ 9 \, 8 \, 0 \, - \, 6 \, \frac{13}{16} = 9 \, - \, 1 \, \frac{3}{16} \]

1st riser = \( 6 \, \frac{13}{16} \) 16 - Riser @ \( 6 \, \frac{13}{16} \, + \, (\frac{3}{16}) = 9 \, - \, 1 \, \frac{3}{16} \)
TREAD

There is always one less tread than the total risers.

There are 17 total risers (fl. to fl.). There will be 16 tread (always subtract the bottom riser).

Many codes require that commercial tread be a min. of 11" inches wide (so we will use 0' – 11").

So we have 16 tread @ 11 inches.

Multiply it out  

11 0 x 1 6 0 0 0 = 14' – 8"

By dropping the bottom riser, we have a right triangle which we can solve with the triangle mode.

9 1 3  RISE

1 4 8 0  RUN

Ask for SLOPE 17' – 3 1/8"

Ask for PITCH 0' – 7 7/16"

Now divide 17' – 3 1/8" by 16 spaces to find what each space will be along the slope:

1 7 3 2 ÷ 1 6 0 0

= 1' – 0 15/16" Check for remainder

INV 0' – 0 – 1/8 (1/8" remainder)

So the slope dim. will read 16 spaces @ 1' – 0 15/16 (1/8" remainder) = 17' – 3 1/8"

The Pitch (or bevel) for stair is 7 7/16 to 12.

To cube a DIM. use the $x^2$ key to raise it to the 2nd power then multiply the results one more time by itself.

Cube 2'  

FIS 2 $x^2$ x 2 = 8'

Surface Area = $2HW + 2HL + LW$

Volume = $L \times W \times H$

Cone Surface Area = $\pi \times R \times \sqrt{R^2 + H^2}$

Volume = $\frac{\pi \times R^2 \times H}{3}$

Cylinder Surface Area = $2 \times \pi \times R \times H$

Volume = $\pi \times R^2 \times H$

Ellipse Area = $\frac{7854}{\pi} \times D \times C$

Volume = $L \times W$

Rectangle Area = $a^2$

Ellipse Area = $L \times W$

Square Area = $a^2$
Limited Six Month Warranty

The Jobber 6 calculator is warranted against defects in materials and workmanship for 6 months from the original date of purchase. The warranty does not cover batteries or vinyl case, and is void if the calculator is damaged by accident, misuse, neglect, or improper service. During the warranty period, we will repair or replace at no charge a calculator that proves defective provided you ship it prepaid and insured to Jobber Instruments with proof of purchase.

No other express warranty is given. The repair or replacement of the calculator is your exclusive remedy. Any other implied warranty of merchantability or fitness is limited to the 6 month duration of this warranty. Jobber Instruments shall not be liable for loss of use of the calculator or other incidental or consequential cost, expenses or damages incurred by the consumer or any other user.

Some states, countries or provinces do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state, country to country, or province to province. Seller makes no express or implied warranty with regard to the keystroke procedures and example material offered or their merchantability or their fitness for any particular purpose whatsoever. The keystroke procedures and pre-programmed material are sold on an “as is” basis. The entire risk as to their quality and performance is with the user. Seller shall not be liable for any incidental or consequential damages in connection with or arising out of the furnishing or performance of the keystroke procedures as represented.

* IMPORTANT NOTE *

IN CASE THE CALCULATOR SHOULD EVER LOCK UP

JOBBER 6 contains a very powerful CPU and is sensitive to rough handling or static electricity, as is any computer.

The JOBBER 6 was engineered to stand up to “in the field use,” but in conditions of high static electricity (very dry conditions/carried in a wool shirt pocket) or being dropped, the unit may “lock-up” (not responding to the on or off buttons).

It can be reset simply by removing the battery and then putting it back into position.

Low battery voltage can also cause the calculator to lock up, and this can be corrected by replacing the battery.

REPAIRS

Please visit our website at WWW.JOBBERCALculator.COM
Select the SERVICE link to access the service form which needs to be filled out and mailed with the calculator.

If you are unable to access the service form, include your name, return address, and daytime phone number and a note describing the nature of the defect. Include a check or money order for $25 to cover the cost of the repair and return shipping.

Mail to:
Jobber Instruments
Attn: Repair Dept.
1211 Douglass Ln.
Sevierville, TN  37876