Procedures for adding feet and inches

1. Line up columns
2. Find lowest common denominator of fractional parts if necessary
3. Add fractional parts first, then move to the left, adding each column as you go
4. Reduce your answer if possible
5. Put feet and inch marks in answer as they were in the problem

Example: \[ 7 \frac{1}{2} " = 7 \frac{2}{4} " \]
\[ + 2 \frac{1}{4} " = 2 \frac{1}{4} " \]
\[ = 9 \frac{3}{4} " \]

6 feet 1 \( \frac{1}{4} \) inches = 6 feet 1 \( \frac{1}{4} \) inches
\[ + 3 \text{ feet} \ 10 \frac{1}{2} \text{ inches} = 3 \text{ feet} \ 10 \frac{1}{2} \text{ inches} \]
\[ = 9 \text{ feet} \ 11 \frac{3}{4} \text{ inches} \]

Note: feet and inches written in symbols have a small dash (--) separating them:

7' - 3 \( \frac{1}{2} \) is 7 feet 3 \( \frac{1}{2} \) inches: 12 ' - 11 \( \frac{1}{4} \) " is 12 feet 11 \( \frac{1}{4} \) inches
always use this mark to separate feet and inches when written with symbols

- Things to remember:
1. When fractional parts become more than a whole, add the whole number on to the inches
   example: \[ 4 \frac{1}{2} " + 4 \frac{1}{2} " = 8 \frac{2}{2} " \] reduces to 9"
2. When there are feet and inches in the problem and the inches add up to 12, change the 12 inches into a foot and add it on to the feet. **Use a zero in the inches column.**
   example: \[ 4 ' - 3 \frac{1}{2} " + 6' - 9" = 10" - 12 \frac{1}{2} " \] reduces to 11' - 0 \( \frac{1}{2} \) "
3. When there are feet and inches in a problem and the inches add up to more than 12, change 12 inches into 1 foot and add it on to the feet. Repeat if necessary.
   example: \[ 2' - 7" + 3' - 7" = 5' -14" \] which reduces to 6 ' - 2 "
   \[ 6' -12 \frac{3}{4} " + 3' - 12 \frac{3}{4} " = 9' - 24 \frac{6}{4} " \] reduces to 11' - 1 \( \frac{1}{2} \) "
4. These problems are often written across (see above) rather than in columns—practice doing them across to save time rewriting them.
5. If the problem has yards, feet and inches, remember that there are 3 feet in a yard, and reduce your answer in the feet column accordingly
## Adding Inches and Feet

### Answer in inches

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### Answer in feet and inches

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<td>1 ft. 6 in.</td>
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<td>+ 2 ft. 3 in.</td>
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<td>5 1/2&quot;</td>
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<td></td>
<td>+ 4'</td>
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<td>8&quot;</td>
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<td>+ 9 ft. 4 in.</td>
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<td>6 3/4&quot;</td>
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<td>+ 3'</td>
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<td>4 1/16&quot;</td>
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<td>4'</td>
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<td>8 1/8&quot;</td>
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<td></td>
<td>+ 7'</td>
<td>-</td>
<td>3 1/4&quot;</td>
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<td></td>
<td>+ 5 ft. 4 1/8 in.</td>
<td>+ 1'</td>
<td>-</td>
<td>3 3/16&quot;</td>
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<td>17'-10&quot;</td>
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<td>+ 7'-10&quot;</td>
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<td>+ 5'-7&quot;</td>
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<td>+ 6 ft. 7 in.</td>
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<td>8'-7 3/8&quot;</td>
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<td>+ 3'-5 1/8&quot;</td>
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<td>6'-10 1/4&quot;</td>
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<td>+ 2'- 2 1/2&quot;</td>
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<td>+ 4' - 8 13/16&quot;</td>
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<td>+ 1 ft. 1 1/8 in.</td>
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<td>19</td>
<td>5'-4 1/16&quot;</td>
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<td>20</td>
<td>1 ft. 11 3/4 in.</td>
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<td>2 ft. 5 3/4 in.</td>
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<td>+ 8 ft. 3 3/4 in.</td>
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<td>22</td>
<td>9'-4 15/16&quot;</td>
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<td>+ 8'-3 5/16&quot;</td>
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<td>+ 9 3/8 in.</td>
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<td>+ 12'-8 1/2&quot;</td>
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<td>7 ft. 1 7/8 in.</td>
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<td>16'-2 1/2&quot;</td>
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</table>
Procedures for subtracting feet and inches

1. Line up columns

2. Start from the right and move to the left, subtracting as you go.

3. Find lowest common denominator of fractional parts if necessary: \[ 6 \frac{3}{4} \text{"} - 2 \frac{1}{2} \text{"} = 6 \frac{3}{4} \text{"} - 2 \frac{2}{4} \text{"} \]

\[ \text{___________________} \]

\[ 4 \frac{1}{4} \text{"} \]

4. Borrow if necessary
   a. If you need more fractional parts, borrow 1 whole inch from the inches and change it into the necessary fraction; add to what you already had:

\[ 6 \frac{1}{2} \text{"} = 6 \frac{2}{4} \text{"} = 5 \frac{6}{4} \text{"} \]

\[ \text{-- } 3 \frac{3}{4} \text{"} = 3 \frac{3}{4} \text{"} = 3 \frac{3}{4} \text{"} \]

\[ \text{___________________} \]

\[ 2 \frac{3}{4} \text{"} \]

b. If you need more inches, borrow 1 whole foot from the feet and change it into 12 inches; add to what you already had:

\[ 2 \text{'} - 6 \text{"} = 1 \text{'} - 18 \text{"} \]

\[ \text{-- } 0 \text{'} - 9 \text{"} = 0 \text{'} - 9 \text{"} \]

\[ 1 \text{'} - 9 \text{"} \]

c. If you need more feet, borrow 1 whole yard from the yards and change it into 3 feet; add to what you already had:

\[ 5 \text{ yards } 4 \text{ feet } 8 \text{ inches} = 4 \text{ yards } 7 \text{ feet } 8 \text{ inches} \]

\[ \text{-- } 3 \text{ yards } 6 \text{ feet } 2 \text{ inches} = 3 \text{ yards } 6 \text{ feet } 2 \text{ inches} \]

\[ 1 \text{ yard } 1 \text{ foot } 6 \text{ inches} \]

5. Reduce if possible

6. Put inch and feet (and other) marks in answer

Things to remember:

1. There are 12 inches in a foot
2. There are 3 feet in a yard
3. Subtraction problems are often written across the page rather than in columns—practice doing them this way instead of re-writing them
Subtracting Inches and Feet

**Answer in inches**

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<td>2</td>
<td>2 1/4&quot;</td>
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<td>2</td>
<td>6 1/16&quot;</td>
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<td>5 3/8&quot;</td>
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<td>12 3/8&quot;</td>
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<td>5</td>
<td>13 3/16&quot;</td>
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<td>29 1/8&quot;</td>
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<td>1 3/8&quot;</td>
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<td>8 7/8&quot;</td>
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<td></td>
<td>3 3/4&quot;</td>
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<td></td>
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<td></td>
<td>2 5/8&quot;</td>
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**Answer in feet and inches**

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<td>9</td>
<td>3 ft. 6 in.</td>
<td>10</td>
<td>9’-11”</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2 ft. 5 in.</td>
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<td>6’-6”</td>
<td>1</td>
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<tr>
<td>13</td>
<td>13 ft. 6 1/2 in.</td>
<td>14</td>
<td>8’-6 3/4”</td>
<td>15</td>
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<td></td>
<td>2 ft. 4 1/4 in.</td>
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<td>7’-5 3/8”</td>
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<td>17</td>
<td>7’-3”</td>
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<td>21 ft. 1 in.</td>
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<td>2'-9”</td>
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<td>-16 ft. 5 in.</td>
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<td>8’-8 5/16”</td>
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<td>5’-9 1/8”</td>
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<td>7’-3 3/8”</td>
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<td>4’-5 7/8”</td>
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<td>25</td>
<td>25 ft. 3 1/2 in.</td>
<td>26</td>
<td>61’-5 3/4”</td>
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<td>-13 ft. 8 1/4 in.</td>
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<td>9’-7 1/2”</td>
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4
Procedures for changing feet and inches into equal units

- To change inches into feet, divide by 12 (there are 12 inches in one foot)

  example: 24 inches = ??? feet

  \[
  \begin{array}{c}
  2 \text{ feet} \\
  12 \) 24 \text{ inches}
  \end{array}
  \]

1) 48 inches = ________ feet
2) 12 inches = ________ feet
3) 144 inches = ________ feet
4) 180 inches = ________ feet
5) 108 inches = ________ feet
6) 84 inches = ________ feet
7) 120 inches = ________ feet
8) 60 inches = ________ feet

- If there is a remainder, state it as inches

  example: 196 inches = ??? feet ??? inches

  \[
  \begin{array}{c}
  16 \text{ feet} \\
  12 \) 196 \text{ inches}
  \end{array}
  \]

  \[
  \begin{array}{c}
  16 \text{ feet} \\
  12 \) 196 \\
  12 \) 76 \\
  12 \) 72 \\
  \_ 4 \text{ inches}
  \end{array}
  \]

9) 13 inches = _____feet _____inches
10) 73 inches = _____feet _____inches
11) 15 inches = _____feet _____inches
12) 110 inches = _____feet _____inches
13) 160 inches = _____feet _____inches
14) 228 inches = _____ ft. _____ in.
15) 289 inches = _____ ft. _____ in.
16) 545 inches = _____ ft. _____ in.
17) 1039 inches = _____ ft. _____ in.
18) 1177 inches = _____ ft. _____ in.
To change feet into inches, multiply by 12 (one foot equals 12 inches)

example: 3 feet = ??? inches  3 feet x 12 inches in a foot = 36  3 ft. = 36 in.

1) 5 feet = _______ inches  

2) 7 feet = _______ inches  

3) 9 feet = _______ inches  

4) 11 feet = _______ inches  

5) 13 feet = _______ inches  

6) 6 feet = _______ inches  

7) 8 feet = _______ inches  

8) 10 feet = _______ inches  

9) 16 feet = _______ inches  

10) 12 feet = _______ inches

If there were inches in the original problem, add them on

example: 3 feet 6 inches = ??? inches  3 x 12 = 36, so 3 feet equals 36 inches plus 6 inches equals 42”

11) 1 ft. 11 in. = _______ inches  

12) 2 ft. 2 in. = _______ inches  

14) 3 ft. 7 in. = _______ inches  

15) 4 ft. 10 in. = _______ inches  

16) 7 ft. 3 in. = _______ inches  

17) 11 ft. 1 in. = _______ inches  

18) 10 ft. 5 in. = _______ inches  

19) 8 ft. 9 in. = _______ inches  

20) 9 ft. 4 in. = _______ inches  

21) 6 ft. 6 in. = _______ inches  

22) 12 ft. 3 in. = _______ inches  

23) 14 ft. 9 in. = _______ inches

24) 13 ft. 2 in. = _______ inches

OR inches may be stated as fractions or decimal parts of a foot

6 inches = 6 in.  

12 inches in a foot

6 = 1  

6 in. = ½’ or .5’

25) _______ inches equals one fourth of a foot: may be written as _____’ or .____’

26) _______ inches equals three fourths of a foot: may be written as _____’ or .____’

27) _______ inches equals one third of a foot: may be written as _____’ or .____’

28) _______ inches equals two thirds of a foot: may be written as _____’ or .____’
Procedures for multiplying feet and inches

1. Change feet and inches into equal units
   
   \[ 3' - 6'' \times 3' - 3'' \text{ becomes } 3 \frac{1}{2}' \times 3 \frac{1}{4}' \text{ or } 3.5' \times 3.25' \text{ or } 42'' \times 39'' \]

2. Multiply

3. Remember to put feet, square feet, inches or square inches where necessary in your answer.
   - Feet times feet equals square feet
   - Inches times inches equals square inches
   - Feet times any number just equals more feet: \( 6' \times 10 = 60' \)
   - Inches times any number just equals more inches: \( 13'' \times 3 = 39'' \)

4. If you wish to convert your answer into the same units used in the problem, see the sheet labeled CONVERSIONS.

5. Shortcut for multiplying feet and inches by whole numbers: multiply each separately.
   - \( 5' - 3'' \times 2 = 10' - 6'' \)  \(( 5' \times 2 = 10' \text{ and } 3'' \times 2 = 6'' )\)

Procedures for dividing feet and inches

1. Change feet and inches into equal units, if necessary. (3 feet 4 inches = 3.333' or 40" or 3 \( \frac{1}{3} '' \))

2. Divide
   - \((SC)\) If the problem is to divide by 2, you may be able to do this without changing the units.
   - \(10 \text{ feet } 5 \text{ inches divided by } 2 \)
   
   \[
   \begin{array}{c}
   \text{10 feet divided by 2} \\
   \text{5 inches divided by 2} \\
   \text{is} \\
   \hline
   \text{5 feet} \\
   \text{2 \( \frac{1}{2} '' \) inches}
   \end{array}
   \]

3. Determine if feet and inch marks are necessary: if so, use them.

If you divided feet by feet, or inches by inches, the answer is a number (followed by a word)

   - Example: a 20 foot length of pipe divided into 2 foot sections equals 10 sections, not feet!!
     \[
     \begin{array}{c}
     \frac{10}{2 \text{ foot}} \text{) 20 foot length pipe}
     \end{array}
     \]
But, if you divided feet (or inches) by a number, the answer will be in feet (or inches).

Example: \[
\begin{array}{c}
50 \text{ feet} \\
2 \\
\end{array}
\] 100 feet
Multiplication problems  (All answers should be in square units)

Work and answer each problem 3 ways:  

- a) in inches  
- b) in feet and fractional parts of a foot  
- c) in feet and decimal parts of a foot

1) 2 - 3" X 2 - 3" =  
   a.  
   b.  
   c.  

2) 1 - 6" X 2 =  
   a.  
   b.  
   c.  

3) 4 - 9" X 5 - 6" =  
   a.  
   b.  
   c.  

4) 3 - 3" X 6 - 0" =  
   a.  
   b.  
   c.  

5) 1 - 4" X 4 - 0" =  
   a.  
   b.  
   c.  

6) 6 - 8" X 4 - 0" =  
   a.  
   b.  
   c.  

Multiplying feet and inches by whole numbers (Answer in regular feet and inches)

7) 12 - 8" X 2 = _____' - _____" (SC)  
   a.  
   b.  
   c.  

8) 6 - 1" X 3 = _____' - _____" (SC)  
   a.  
   b.  
   c.  

9) 5 - 2" X 4 = _____' - _____ (SC)  
   a.  
   b.  
   c.  

10) 1 - 3" X 5 = _____' X _____"  
    a.  
    b.  
    c.  

Division problems

Dividing feet and inches by whole numbers

Work and answer each problem 3 ways:

a. in inches
b. in feet and fractions of a foot
c. in feet and decimal parts of a foot

5) 12' - 8" divided by 4 =

a. 

b. 

c. 

6) 250' - 4" divided by 2 =

a. 

b. 

c. 

7) 6' - 9" divided by 3 =

a. 

b. 

c. 

8) 54' - 6" divided by 6 =

a. 

b. 

c. 

Dividing feet and inches by feet and inches (answer in numbers only)

1) 12' - 9" divided by 3' - 3" =

a. 

b. 

c. 

2) 27' - 9" divided by 9' - 3" =

a. 

b. 

c. 

3) 8' - 9" divided by 3' - 6" =

a. 

b. 

c. 

4) 10' - 0" divided by 2' - 6" =

a. 

b. 

c.
Word problems

1. Jackie has concrete blocks that are 6 inches tall. How many does she need to make one stack 5' - 6" high?

2. Tamika cut $6 \frac{7}{8}$ " from a strip of drywall 4 ' in length. How long is the piece that is left?

3. Carol has six bricks, each $8 \frac{3}{4}$ " long. Laid end-to-end, how far would they extend?

4. Evita cuts 2x4s the following lengths: $4 \frac{1}{2}$ " , $6 \frac{1}{4}$ " , $8 \frac{3}{8}$ ' & $9 \frac{3}{16}$ " . What is the total length of the wood she cut?

5. How many panels 2' - 6" wide can Phyllis fit into a space 10'- 0 " wide?

6. $2 \frac{1}{16}$ " of material is missing from a 15 " piece of cast iron pipe. How much remains?

7. Yolanda wants to put two windows directly on top of each other. One is 4' - 3 $\frac{1}{8}$ " high and the other is 2' - 5 $\frac{15}{16}$ " high. How high must the opening be?

8. How many square inches are there in an opening measuring 14 $\frac{1}{2}$ " by 14"?

9. From a piece of conduit 7' - 3 " long, Mariel cut off 2' – $7\frac{1}{2}$ " . How much was left?

10. How many bricks does Jackie need to build one course of a wall 35' - 5 " long if each brick (including mortar) measures $8 \frac{1}{2}$ " long?

11. How much plastic will Prudence have to buy to cover an opening 5 $\frac{1}{3}$ ' long by 3 $\frac{3}{4}$ ' wide? (work this as a fraction problem or round up the answer to the nearest foot)

12. Vanessa needs three pieces of wood 3' – $0\frac{1}{4}$ " long and two pieces $5\frac{1}{2}$ " long for her planter box. What is the total length of the wood she needs?

Extra effort:

13. Tammy needs 9' - 2" of wood. She has one piece that is 4' – 2 $\frac{1}{2}$ " long and another that is 2' - 9 $\frac{3}{4}$ ". How much more does she need?
**Feet and Inches review**  
(answer in feet and inches, not decimals)

1) \( 3' - 7 \frac{1}{4}'' + 3' - 11 \frac{1}{2}'' = \)  
2) \( 7' - 3 \frac{1}{16}'' - 2' - 5 \frac{15}{16}'' = \)  
3) \( 16' - 9 \frac{1}{8}'' - 4' - 8 \frac{15}{16}'' = \)  
4) \( 11' - 1 \frac{1}{2}'' + 8' - 1 \frac{1}{2}'' = \)  
5) \( 1' - 8'' \times 2 = \)  
6) \( 6' - 5'' \div 2 = \)  
7) \( 3' - 4'' \times 2 = \)  
8) \( 8' - 1'' \div 2 = \)  
9) \( 9' - 5 \frac{3}{8}'' \)  
- \( 8' - 7 \frac{1}{2}'' \)  

10) \( 13' - 0'' \)  
- \( 6' - 6 \frac{7}{8}'' \)  
- \( 4' - 10 \frac{1}{4}'' \)  
- \( 1' - 11 \frac{1}{4}'' \)  

11) \( 9' - 3 \frac{9}{16}'' \)  

12) \( 32' - 0 \frac{1}{2}'' \)  

13) \( 8' - 9'' \)  
14) \( 2' - 6 \frac{1}{2}'' \)  
15) \( 12' - 2 \frac{5}{8}'' \)  
16) \( 5' - 0 \frac{1}{16}'' \)  

2' - 4 \( \frac{1}{2}'' \)  
6' - 3 \( \frac{1}{4}'' \)  
3' - 1 \( \frac{1}{8}'' \)  
2' - 2 \( \frac{9}{16}'' \)  

+ 6' - 10 \( \frac{1}{4}'' \)  
+ 8' - 0 ''  
+ \( \frac{1}{4}'' \)  
+ 1' - 0''  

17) \( 5' - 11 \frac{1}{2}'' + 2' - 0 \frac{1}{4}'' = \)  
18) \( 6' - 3'' \div 3 = \)  
19) \( 3' - 9 \frac{15}{16}'' - 8 \frac{1}{4}'' = \)  

20) \( 9' - 4'' \times 4 = \)  
21) \( 72'' \div 12'' = \)  
22) \( 1 \frac{1}{2}'' \div \frac{1}{2}'' = \)  
23) \( 2 \frac{1}{3}'' \div 8 = \)  

24) \( 137 \frac{1}{2}'' \div 2 \frac{3}{4}'' = \)  
25) \( \frac{7}{8}'' \times 8'' = \)  
26) \( 5 \frac{3}{4}'' + 2' + \frac{1}{8}'' + 7' - 0 \frac{1}{16}'' = \)  

**Word problems:**

27) Renee trims \( 2 \frac{3}{4}'' \) from a piece of sheet metal 6 foot long. How much is left?

28) Find the difference in height between a wall \( 2' - 6 \frac{1}{2}'' \) and one \( 6' - 5 \frac{3}{4}'' \).
29) Suzette stacks plywood that is \( \frac{3}{4} \)" thick, \( \frac{1}{2} \)" thick and two \( \frac{1}{4} \)" pieces. How tall is the stack?

30) Combine 3 \( \frac{1}{2} \)" with 8 \( \frac{1}{4} \)" and 12 \( \frac{1}{32} \)". What is the total?

31) Find the amount of lumber needed for 12 shelves that are each 5 \( \frac{2}{3} \) feet long.

32) How much carpet is needed to cover the floor of a closet 2 \( \frac{3}{4} \)\" long by 4 \( \frac{1}{2} \)\" wide?

33) You evenly split a \( \frac{3}{4} \)" thick chocolate bar between you and three friends. How thick is each piece?

34) Louellen shaves \( \frac{1}{16} \)" slivers from a 1/2" bar of pig iron. How many will she get?

Extra Challenge:

35) 3'-9" ÷ 1'-8 " ÷ \( \frac{4}{5} \) = 36) 90' ÷ 7'-6" =

37) 6'-3 \( \frac{3}{4} " \) — 41 \( \frac{1}{8} " \) =

38) 48' ÷ 1'-4" = 39) 2'-8 \( \frac{1}{2} " \) x \( \frac{1}{6} \)" =

40) 1 yard + 6'-3 \( \frac{1}{4} " \) x 1.25 =
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>16) 45 ft. 5 in.</td>
<td>19) 105</td>
<td>5) a. 768 sq. &quot;</td>
</tr>
<tr>
<td>17) 86 ft. 7 in</td>
<td>20) 112</td>
<td>b. 5 ( \frac{1}{3} ) sq. ft.</td>
</tr>
<tr>
<td>18) 98 ft. 1 in.</td>
<td>21) 78</td>
<td>c. 5.3333 sq. ft.</td>
</tr>
</tbody>
</table>

**Page 6**

| 22) 147 | 6) a. 3840 sq. in. |
| 1) 60 | 23) 177 | b. 26 \( \frac{2}{3} \) sq. ft. |
| 2) 84 | 24) 158 | c. 26.6667 sq. ft. |

| 3) 108 | 25) 3 \( \frac{1}{4} \) \( .25' \) |
| 4) 132 | 26) 9 \( \frac{3}{4} \) \( .75' \) | 7) 25' - 4" |
| 5) 156 | 27) 4 \( \frac{1}{3} \) \( .3333' \) | a. 304 in. |
| 6) 72 | 28) 8 \( \frac{2}{3} \) \( .6667' \) | b. 25 \( \frac{1}{2} \) ft. |

**Page 9**

<p>| 8) 18' - 3&quot; | 1) a. 729 sq. in. | a. 219 in. |
| 8) 120 | b. 5 ( \frac{1}{16} ) sq. ft. | b. 18 ( \frac{1}{4} ) ft. |
| 9) 192 | c. 5.0625 sq. ft. | c. 18.25 ft. (18.2499') |
| 10) 144 | 2) a. 432 sq. in. | 9) 20' - 8&quot; |
| 11) 23 | b. 3 sq. ft. | a. 248 in. |
| 12) 26 | c. 3 sq. ft. | b. 20 ( \frac{2}{3} ) ft. |
| 13) 43 | 3) a. 3762 sq. in. | c. 20.6667 (8) ft. |
| 14) 58 | b. 26 ( \frac{1}{3} ) sq. ft. | 10) 6' - 3&quot; |
| 15) 87 | 3) a. 3762 sq. in. | c. 20.6667 (8) ft. |
| 16) 133 | b. 26 ( \frac{1}{3} ) sq. ft. | 10) 6' - 3&quot; |
| 17) 125 | c. 26.125 sq. ft. | a) 75 in. |
| 18) 63 | 4) a. 2808 sq. &quot; | b) 6 ( \frac{1}{4} ) ft. |
| b. 19 ( \frac{1}{2} ) sq. ft. | c) 6.25 ft. |
| c. 19.5 sq. ft. | | |</p>
<table>
<thead>
<tr>
<th>Page 10</th>
<th>7) 2 ft. 3 in.</th>
<th>Page 12 and 13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) a. $3\frac{12}{13}$ or 3.92</td>
<td>a. 27”</td>
<td>1) 7’-6(\frac{1}{4})”</td>
</tr>
<tr>
<td>b. 3 $\frac{12}{13}$</td>
<td>b. 2 $\frac{1}{4}$’</td>
<td>2) 4’- 9 $\frac{1}{8}$”</td>
</tr>
<tr>
<td>c. 3.92</td>
<td>c. 2.25’</td>
<td>3) 12’- 0 $\frac{1}{2}$”</td>
</tr>
<tr>
<td>2) a. 3</td>
<td>8) 9’-1”</td>
<td>4) 19’- 3”</td>
</tr>
<tr>
<td>b. 3</td>
<td>a. 109”</td>
<td>5) 3’- 4”</td>
</tr>
<tr>
<td>c. 3</td>
<td>b. 9 $\frac{1}{12}$’</td>
<td>6) 3’- 2 $\frac{1}{2}$”</td>
</tr>
<tr>
<td>3) a. 2 $\frac{1}{2}$</td>
<td>c. 9.0833’</td>
<td>7) 6’- 8”</td>
</tr>
<tr>
<td>b. 2 $\frac{1}{2}$</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. 2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4) a. 4</td>
<td>2) 41 $\frac{1}{8}$” or 3’- 5 $\frac{1}{8}$”</td>
<td>10) 6’- 5 $\frac{1}{8}$”</td>
</tr>
<tr>
<td>b. 4</td>
<td>3) 52 $\frac{1}{2}$” or 4’- 4 $\frac{1}{2}$”</td>
<td>11) 4’- 5 $\frac{5}{16}$”</td>
</tr>
<tr>
<td>c. 4</td>
<td>4) 2’- 4 $\frac{5}{16}$”</td>
<td>12) 30’- 1 $\frac{1}{4}$”</td>
</tr>
<tr>
<td>5) 3’- 2”</td>
<td>5) 4 panels</td>
<td>13) 21’- 0”</td>
</tr>
<tr>
<td>a. 38”</td>
<td>6) 1’- 0 $\frac{5}{16}$”</td>
<td>14) 19’- 0 $\frac{5}{16}$”</td>
</tr>
<tr>
<td>b. 3 $\frac{1}{6}$’</td>
<td>7) 6’- 9 $\frac{1}{16}$”</td>
<td>15) 29’- 8”</td>
</tr>
<tr>
<td>c. 3.1667’</td>
<td>8) 203 square inches</td>
<td>16) 10’- 0”</td>
</tr>
<tr>
<td>6) 125 ft. 2 in.</td>
<td>9) 4’- 7 $\frac{1}{2}$”</td>
<td>17) 17’- 1 $\frac{3}{4}$”</td>
</tr>
<tr>
<td>a. 1502”</td>
<td>10) 50 bricks</td>
<td>18) 2’- 1”</td>
</tr>
<tr>
<td>b. 125 $\frac{1}{6}$’,</td>
<td>11) 20 square feet</td>
<td>19) 3’- 11 $\frac{11}{16}$”</td>
</tr>
<tr>
<td>c. 125.165’</td>
<td>12) 9’- 11 $\frac{3}{4}$”</td>
<td>20) 37’- 4”</td>
</tr>
<tr>
<td>13) 2’- 1 $\frac{3}{4}$”</td>
<td>21) 6</td>
<td></td>
</tr>
</tbody>
</table>
Pages 12 and 13 Cont.

22) 3
23) $\frac{7}{24}$, or $3 \frac{1}{2}$

24) 50
25) 7 sq. in.
26) 9' - 5 $\frac{15}{16}$
27) 5' - 9 $\frac{1}{4}$
28) 3' - 11 $\frac{1}{4}$
29) 1 $\frac{3}{4}$" tall
30) 23 $\frac{25}{32}$" or 1' - 1 $\frac{25}{32}$"

31) 68 ft.
32) 12 $\frac{3}{8}$ sq. ft.
33) $\frac{3}{16}$" thick

34) 8 slivers
35) 2 $\frac{13}{16}$"

36) 12
37) 2' - 10 $\frac{5}{8}$"

38) 36

39) 65 sq. in.
40) 11' - 7 $\frac{1}{16}$"