Name _____ #_____

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 ¾"

6 feet 1 $\frac{1}{4}$ **inches = 6 feet 1** $\frac{1}{4}$ **inches**

+3 feet 10 $\frac{1}{2}$ **inches = 3 feet 10** $\frac{2}{4}$ **inches**

_____

9 feet 11 ¾ 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

1) $16\ \frac{1}{4}$"
$+1\ \frac{1}{8}$"

2) $5\ \frac{1}{8}$"
$+\ 7\ \frac{3}{8}$"

3) $22\frac{1}{16}$"
$+\ 3\ \frac{3}{16}$"

4) $9\ \frac{1}{2}$"
$+\ 2\ \frac{1}{4}$"

Answer in feet and inches

5) 1 ft. 6 in.
+ 2 ft. 3 in.

6) 2'- 5"
+ 3'- $5\frac{1}{2}$"

7) 4' -$3\frac{1}{2}$"
+ 4' - 8"

8) 5 ft. 7 in.
+ 9 ft. 4 in.

9) 2' - $6\frac{3}{4}$".
+ 3' - 4 $\frac{1}{16}$" .

10) 4'- 8 $\frac{1}{8}$"
+ 7'- 3 $\frac{1}{4}$"

11) 13 ft. 5 $\frac{1}{2}$ in.
+ 5 ft. 4 $\frac{1}{8}$ in.

12) 11' - 7 $\frac{1}{4}$"
+ 1' - 3 $\frac{3}{16}$"

13) 3 ft. 9 in.
+ 8 ft. 4 in

14) 17'-10"
+ 7'-10"

15) 9' - 9"
+ 5' - 7"

16) 12 ft. 8 in.
+ 6 ft. 7 in.

17) 8'- $7\frac{3}{8}$ "
+ 3'- 5 $\frac{1}{8}$"

18) 6'-10 $\frac{1}{4}$"
+ 2'- 2 $\frac{1}{2}$"

19) 5' - 4 $\frac{1}{16}$"
+ 4 '- 8 $\frac{13}{16}$"

20) 1 ft. 11 $\frac{3}{4}$ in.
+ 1 ft. $1\frac{1}{8}$ in.

21) 2 ft. 5 $\frac{3}{4}$ in.
+ 8 ft. 3 $\frac{3}{4}$ in.

22) 9'- 4 $\frac{15}{16}$"
+ 8' -3 $\frac{5}{16}$"

23) 7 ft. 1 $\frac{7}{8}$ in.
+ $9\frac{3}{8}$ in.

24) 16'- 2 $\frac{1}{2}$"
+ 12' - 8 $\frac{1}{2}$"

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:

$$\begin{array}{r} 6\ \tfrac{3}{4}\text{"} = 6\tfrac{3}{4}\text{"} \\ -\quad 2\ \tfrac{1}{2}\text{"} -- 2\ \tfrac{2}{4}\text{"} \\ \hline 4\ \tfrac{1}{4}\text{"} \end{array}$$

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:

$$\begin{array}{r} 6\ \tfrac{1}{2}\text{"} = 6\ \tfrac{2}{4}\text{"} = 5\ \tfrac{6}{4}\text{"} \\ -- 3\tfrac{3}{4}\text{"} = 3\ \tfrac{3}{4}\text{"} = 3\ \tfrac{3}{4}\text{"} \\ \hline 2\ \tfrac{3}{4}\text{"} \end{array}$$

   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:

$$\begin{array}{r} 2\text{ '- }6\text{ " = }1\text{ '- }18\text{ "} \\ \underline{-- 0\text{ '- }9\text{ " = }0\text{ ' - }9\text{ "}} \\ 1\text{' - }9\text{ "} \end{array}$$

   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:

$$\begin{array}{r} 5\text{ yards }4\text{ feet }8\text{ inches} = 4\text{ yards }7\text{ feet }8\text{ inches} \\ \underline{-- 3\text{ yards }6\text{ feet }2\text{ inches} = 3\text{ yards }6\text{ feet }2\text{ inches}} \\ 1\text{ yard }1\text{ foot }6\text{ inches} \end{array}$$

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

1) $9\ \frac{1}{2}$"
–- $2\ \frac{1}{4}$"
_____

2) $21\ \frac{3}{16}$"
–- $6\ \frac{1}{16}$"
_____

3) $7\ \frac{7}{8}$"
–- $5\ \frac{3}{8}$"
_____

4) $15\ \frac{3}{4}$"
–- $12\ \frac{3}{8}$"
_____

5) $13\ \frac{3}{16}$"
–- $1\ \frac{3}{8}$"
_____

6) $29\ \frac{1}{8}$"
–- $8\ \frac{7}{8}$"
_____

7) $16\ \frac{1}{4}$"
–- $3\ \frac{3}{4}$"
_____

8) $11\frac{1}{2}$"
–- $2\ \frac{5}{8}$"
_____

Answer in feet and inches

9) 3 ft. 6 in.
–- 2 ft. 5 in.
_____

10) 9' -11"
–- 6' - 6"
_____

11) 4 ft. 8 in.
–- 1 ft. 6 in.
_____

12) 15' - 9"
–- 7' - 1"
_____

13) 13 ft. $6\ \frac{1}{2}$ in.
–- 2 ft. $4\ \frac{1}{4}$ in.
_____

14) 8'- $6\ \frac{3}{4}$"
–- 7'- $5\ \frac{3}{8}$"
_____

15) 17 ft. $9\ \frac{1}{4}$ in.
–- 8 ft. $1\ \frac{1}{8}$ in.
_____

16) 12' - $4\frac{15}{16}$"
–- 10' - $3\ \frac{7}{8}$"
_____

17) 7' - 3"
–- 2'- 9"
_____

18) 21 ft. 1 in.
–-16 ft. 5 in.
_____

19) 16' - 2"
–- 11' - 8"
_____

20) 18 ft. 9 in.
–- 7 ft. 11 in.
_____

21) 8'- $8\ \frac{5}{16}$"
–- 7'- $3\ \frac{3}{8}$"
_____

22) 5'- $9\ \frac{1}{8}$"
– 4'- $5\ \frac{7}{8}$"
_____

23) 14' - $11\frac{1}{4}$"
–- 4' - $2\ \frac{1}{2}$"
_____

24) 6 ft. $7\ \frac{1}{8}$ in.
–-1 ft. $3\ \frac{1}{4}$ in.
_____

25) 25 ft. $3\ \frac{1}{2}$ in.
–-13 ft. $8\ \frac{1}{4}$ in.
_____

26) 61'- $5\frac{3}{4}$"
–- 9'- $7\ \frac{1}{2}$"
_____

27) 13 ft. $9\ \frac{1}{4}$ in.
–- 7 ft. $10\ \frac{1}{8}$ in.
_____

28) 34' - $2\ \frac{3}{8}$"
–- 6' - $11\ \frac{1}{16}$"
_____

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 = <u>???</u> feet

2 feet
12) 24 inches

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 = <u>???</u> feet <u>???</u> inches

16 - - - - - - - - - - - - **16 feet**
12) 196
12
76
72
4 - - - - - - - - - - - - - - **4 inches**

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 = <u>??? inches</u> **3** feet **x 12** inches in a foot **= 36** **<u>3 ft. = 36 in.</u>**

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 = <u>???</u> 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
18) 5 ft. 3 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 = <u>6</u> inches **<u>6 =</u> <u>1</u>** **6 in. = ½'** or **.5'**
12 inches in a foot **12= 2**

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 “ x 3 ‘- 3 “ becomes $3\frac{1}{2}$‘ x $3\frac{1}{4}$‘ **or** 3.5 ‘ x 3.25 ‘ **or** 42 “ x 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 ‘ x 10 = 60 ‘
   Inches times any number just equals more inches: 13” x 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.
   Example: 5 ‘- 3 “ x 2 = 10 ‘- 6 “ (5’ x 2 = 10 ‘ 3 “ x 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.

   Example: **10 feet 5 inches divided by 2**

10 feet divided by 2 is	5 inches divided by 2 is
5 feet	**2 $\frac{1}{2}$ inches**

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 <u>10 sections</u>, **not feet!!**

```
        10
2 foot ) 20 foot length pipe
```

But, if you divided feet (or inches) by a number, the answer will be in feet (or inches)

Example : 50 feet

2)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" x 2 =

6) 6'-5" ÷ 2 **=**

7) 3'- 4" x 2 =

8) 8'- 1 " ÷ 2 **=**

9) 9'-5 $\frac{3}{8}$"
— 8'-7 $\frac{1}{2}$"
_____

10) 13'-0"
— 6'- 6 $\frac{7}{8}$"
_____

11) 9'-3 $\frac{9}{16}$"
— 4'-10 $\frac{1}{4}$"
_____

12) 32'- 0 $\frac{1}{2}$"
— 1'-11 $\frac{1}{4}$"
_____

13) 8'- 9"
2'- 4 $\frac{1}{2}$"
3'- 1 $\frac{1}{8}$"
+ 6'-10 $\frac{1}{4}$"
_____

14) 2'-6 $\frac{1}{2}$"
6'-3 $\frac{1}{4}$"
2'-2 $\frac{9}{16}$"
+ 8'-0 "
_____

15) 12'-2 $\frac{5}{8}$"
3 $\frac{3}{4}$"
7'-1 $\frac{6}{16}$"
+ $\frac{1}{4}$"
_____

16) 5'-0 $\frac{1}{16}$"
7 $\frac{5}{8}$"
3'-4 $\frac{5}{16}$"
+ 1'-0"
_____

17) 5'-11 $\frac{1}{2}$" **+** 2'-0 $\frac{1}{4}$" =

18) 6'-3" ÷ 3 =

19) 3'-9 $\frac{15}{16}$" **—** 8 $\frac{1}{4}$" =

20) 9'-4 " x 4 =

21) 72" ÷ 12 " =

22) 1 $\frac{1}{2}$" ÷ $\frac{1}{2}$" **=**

23) 2 $\frac{1}{3}$' ÷ 8 =

24) 137 $\frac{1}{2}$" ÷ 2 $\frac{3}{4}$" =

25) $\frac{7}{8}$ " x 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 =

Answer key

Page 2

1) 17 $\frac{3}{8}$”
2) 12 $\frac{1}{2}$”
3) 25 $\frac{1}{4}$”
4) 11 $\frac{3}{4}$”
5) 3 ft. 9 in.
6) 5’- 10 $\frac{1}{2}$”
7) 8’ -11 $\frac{1}{2}$”
8) 14 ft. 11 in.
9) 5’- 10 $\frac{13}{16}$”
10) 11’-11 $\frac{3}{8}$”
11) 18 ft. 9 $\frac{5}{8}$”
12) 12’- 10$\frac{7}{16}$”
13) 12 ft. 1 in.
14) 25’- 8”
15) 15’-4”
16) 19 ft. 3 in.
17) 12’ -0 $\frac{1}{2}$”
18) 9’- 0 $\frac{3}{4}$”
19) 10’- 0 $\frac{7}{8}$”
20) 3 ft. 0 $\frac{7}{8}$”
21) 10 ft. 9 $\frac{1}{2}$”
22) 17’ - 8 $\frac{1}{4}$”
23) 7ft. 11 $\frac{1}{4}$”

Page 2 cont.

24) 28’ -11”

Page 4

1) 7 $\frac{1}{4}$”
2) 15 $\frac{1}{8}$”
3) 2 $\frac{1}{2}$”
4) 3 $\frac{3}{8}$”
5) 11 $\frac{13}{16}$”
6) 20 $\frac{1}{4}$”
7) 12 $\frac{1}{2}$”
8) 8 $\frac{7}{8}$”
9) 1 ft. 1 in.
10) 3’-5”
11) 3 ft. 2 in
12) 8’-8”
13) 11’-2 $\frac{1}{4}$”
14) 1’-1$\frac{3}{8}$”
15) 9’-8$\frac{1}{8}$”
16) 2’-1$\frac{1}{16}$”
17) 4’-6”
18) 4 ft. 8 in.
19) 4’-6”
20) 10 ft. 10 in.
21) 1’- 4$\frac{15}{16}$”

Page 4 cont.

22) 1’-3 $\frac{1}{4}$”
23) 10’- 8$\frac{3}{4}$”
24) 5 ft. 3 $\frac{7}{8}$”
25) 11 ft. 7 $\frac{1}{4}$”
26) 51’-10$\frac{1}{4}$”
27) 5 ft. 11$\frac{1}{8}$”
28) 27’- 3$\frac{5}{16}$”

Page 5

1) 4
2) 1
3) 12
4) 15
5) 9.
6) 7
7) 10
8) 5
9) 1 ft. 1 in.
10) 6 ft. 1 in.
11) 1 ft. 3 in.
12) 9 ft. 2 in.
13) 13 ft. 4 in.
14) 19 ft. 0 in.
15) 24 ft. 1 in.

Page 5 Cont.

16) 45 ft. 5 in.

17) 86 ft, 7 in

18) 98 ft. 1 in.

Page 6

1) 60

2) 84

3) 108

4) 132

5) 156

6) 72

7) 96

8) 120

9) 192

10) 144

11) 23

12) 26

13) 43

14) 58

15) 87

16) 133

17) 125

18) 63

Page 6 Cont.

19) 105

20) 112

21) 78

22) 147

23) 177

24) 158

25) 3 $\frac{1}{4}$ .25’

26) 9 $\frac{3}{4}$ .75’

27) 4 $\frac{1}{3}$ .3333’

28) 8 $\frac{2}{3}$ .6667’

Page 9

1) a. 729 sq. in.

b. 5 $\frac{1}{16}$ sq. ft.

c. 5.0625 sq ‘

2) a. 432 sq. in.

b. 3 sq. ft.

c. 3 sq. ft.

3) a. 3762 sq. in.

b. 26 $\frac{1}{8}$ sq. ‘

c. 26.125 sq. ft.

4) a. 2808 sq. “

b. 19 $\frac{1}{2}$ sq. ft.

c. 19.5 sq. ft.

Page 9 Cont.

5) a. 768 sq. “

b. 5 $\frac{1}{3}$ sq. ft.

c. 5.3333 sq. ft.

6) a. 3840 sq. in.

b. 26 $\frac{2}{3}$ sq. ft.

c. 26.6667 sq. ‘

7) 25’- 4”

a. 304 in.

b. 25 $\frac{1}{3}$ ft.

c. 25.3333 ft.

8) 18’- 3”

a. 219 in.

b. 18 $\frac{1}{4}$ ft.

c. 18.25 ft. (18.2499’)

9) 20’- 8”

a. 248 in.

b. 20 $\frac{2}{3}$ ft.

c. 20.6667 (8) ft.

10) 6’- 3”

a) 75 in.

b) 6 $\frac{1}{4}$ ft.

c) 6.25 ft.

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1) a. $3\frac{12}{13}$ or 3.92
   b. $3\ \frac{12}{13}$
   c. 3.92

2) a. 3
   b. 3
   c. 3

3) a. $2\frac{1}{2}$
   b. $2\ \frac{1}{2}$
   c. 2.5

4) a. 4
   b. 4
   c. 4

5) <u>3'- 2"</u>
   a. 38"
   b. $3\frac{1}{6}$'
   c. 3.1667'

6) <u>125 ft. 2 in.</u>
   a. 1502"
   b. 125 $\frac{1}{6}$'
   c. 125.165'

7) <u>2 ft. 3 in.</u>
   a. 27"
   b. 2 $\frac{1}{4}$'
   c. 2.25'

8) <u>9'-1"</u>
   a. 109"
   b. $9\frac{1}{12}$ '
   c. 9.0833'

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1) 11 blocks
2) 41 $\frac{1}{8}$" or 3'- $5\frac{1}{8}$"
3) $52\frac{1}{2}$" or 4'- $4\frac{1}{2}$"
4) 2'- $4\frac{5}{16}$"
5) 4 panels
6) 1'- $0\frac{5}{16}$"
7) 6'- $9\frac{1}{16}$"
8) 203 square inches
9) 4'- $7\frac{1}{2}$"
10) 50 bricks
11) 20 square feet
12) 9'- $11\frac{3}{4}$"
13) 2'- $1\frac{3}{4}$"

Page 12 and 13

1) 7'-$6\frac{3}{4}$"
2) 4'- $9\frac{1}{8}$"
3) 12'- $0\frac{1}{2}$"
4) 19'- 3"
5) 3'- 4"
6) 3'- $2\frac{1}{2}$"
7) 6'- 8"
8) 4'- $0\frac{1}{2}$"
9) $9\frac{7}{8}$"
10) 6'- $5\frac{1}{8}$"
11) 4'- $5\frac{5}{16}$"
12) 30'- $1\frac{1}{4}$"
13) 21'- 0"
14) 19'- $0\frac{5}{16}$"
15) 29'- 8"
16) 10'- 0"
17) 17'- $1\frac{3}{4}$"
18) 2'- 1"
19) 3'- $11\frac{11}{16}$"
20) 37'- 4"
21) 6

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'- $7\frac{1}{16}$"