

1. Determine the following sums and differences. Show your work.

a. $1\text{ ft} + 2\text{ ft} = \underline{1} \text{ yd}$
 $\quad \quad \quad \vee$
 $\quad \quad \quad 3\text{ ft}$

b. $3\text{ yd } 1\text{ ft} + 2\text{ ft} = \underline{4} \text{ yd}$
 $\quad \quad \quad \vee$
 $\quad \quad \quad 3\text{ ft} = 1\text{ yd}$

c. $1\text{ yd} - 1\text{ ft} = \underline{2} \text{ ft}$
 $\quad \quad \quad \downarrow$
 $\quad \quad \quad 3\text{ ft}$

d. $8\text{ yd} - 1\text{ ft} = \underline{7} \text{ yd } \underline{2} \text{ ft}$
 $\quad \quad \quad \wedge$
 $\quad \quad \quad 7\text{ yd } 3\text{ ft}$

e. $3\text{ in} + 9\text{ in} = \underline{1} \text{ ft}$
 $\quad \quad \quad \vee$
 $\quad \quad \quad 12\text{ in}$

f. $6\text{ in} + 9\text{ in} = \underline{1} \text{ ft } \underline{3} \text{ in}$
 $\quad \quad \quad \wedge$
 $\quad \quad \quad 6\text{ in } 3\text{ in}$

g. $1\text{ ft} - 8\text{ in} = \underline{4} \text{ in}$
 $\quad \quad \quad \downarrow$
 $\quad \quad \quad 12\text{ in}$

h. $5\text{ ft} - 8\text{ in} = \underline{4} \text{ ft } \underline{4} \text{ in}$
 $\quad \quad \quad \wedge$
 $\quad \quad \quad 4\text{ ft } 12\text{ in}$

2. Find the following sums and differences. Show your work.

a. $5\text{ yd } 2\text{ ft} + 2\text{ ft} = \underline{6} \text{ yd } \underline{1} \text{ ft}$
 $\quad \quad \quad \circlearrowleft$
 $\quad \quad \quad 1\text{ yd } 1\text{ ft } 1\text{ ft}$

b. $7\text{ yd } 2\text{ ft} + 2\text{ yd } 2\text{ ft} = \underline{10} \text{ yd } \underline{1} \text{ ft}$
 $\quad \quad \quad \circlearrowleft$
 $\quad \quad \quad 1\text{ yd } 1\text{ ft } 1\text{ ft}$

c. $4\text{ yd } 1\text{ ft} - 2\text{ ft} = \underline{3} \text{ yd } \underline{2} \text{ ft}$
 $\quad \quad \quad \wedge$
 $\quad \quad \quad 3\text{ yd } 4\text{ ft}$

d. $6\text{ yd } 1\text{ ft} - 12\text{ yd } 2\text{ ft} = \underline{3} \text{ yd } \underline{2} \text{ ft}$
 $\quad \quad \quad \wedge$
 $\quad \quad \quad 5\text{ yd } 4\text{ ft}$

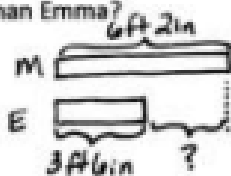
e. $6\text{ ft } 9\text{ in} + 4\text{ in} = \underline{7}\text{ ft } \underline{1}\text{ in}$

f. $4\text{ ft } 4\text{ in} + 3\text{ ft } 11\text{ in} = \underline{8}\text{ ft } \underline{3}\text{ in}$

g. $34\text{ ft } 4\text{ in} - 8\text{ in} = \underline{33}\text{ ft } \underline{8}\text{ in}$

h. $7\text{ ft } 1\text{ in} - 5\text{ ft } 10\text{ in} = \underline{1}\text{ ft } \underline{3}\text{ in}$

3. Matthew is 6 feet 2 inches tall. His little cousin Emma is 3 feet 6 inches tall. How much taller is Matthew than Emma?



$$6\text{ ft } 2\text{ in} - 3\text{ ft } 6\text{ in} = 2\text{ ft } 8\text{ in}$$

$$5\text{ ft } 14\text{ in}$$

Matthew is 2 feet 8 inches taller than Emma.

4. In gym class, Jared climbed 10 feet 4 inches up a rope. Then, he continued to climb up another 3 feet 9 inches. How high did Jared climb?

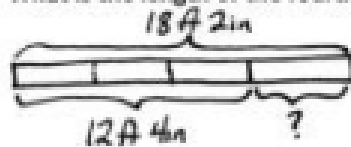


$$3\text{ ft } 9\text{ in} \xrightarrow{+10\text{ ft}} 13\text{ ft } 9\text{ in} \xrightarrow{+3\text{ in}} 14\text{ ft} \xrightarrow{+1\text{ in}} 14\text{ ft } 1\text{ in}$$

Jared climbed 14 feet 1 inch high.

5. A quadrilateral has a perimeter of 18 feet 2 inches. The sum of three of the sides is 12 feet 4 inches.

- a. What is the length of the fourth side?

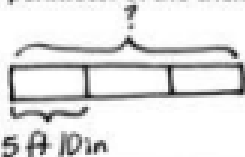


$$12\text{ ft } 4\text{ in} \xrightarrow{+8\text{ in}} 13\text{ ft} \xrightarrow{+5\text{ ft}} 18\text{ ft} \xrightarrow{+2\text{ in}} 18\text{ ft } 2\text{ in}$$

$$8\text{ in} + 5\text{ ft} + 2\text{ in} = 5\text{ ft } 10\text{ in}$$

The length of the fourth side is 5 feet 10 inches

- b. An equilateral triangle has a side length equal to the fourth side of the quadrilateral. What is the perimeter of the triangle?



$$\begin{aligned} 3 \times 5\text{ ft } 10\text{ in} &= (3 \times 10\text{ ft}) + (3 \times 10\text{ in}) \\ &= 30\text{ ft} + 30\text{ in} \\ &= 32\text{ ft } 6\text{ in} \end{aligned}$$

The perimeter of the triangle is 32 feet 6 inches.