

ANSWER: a. 24 b. 30 c. 16 d. 25

$$\begin{array}{r} -9 \\ 1 \\ \hline 14 \\ 15 \end{array} \quad \begin{array}{r} -7 \\ 3 \\ \hline 20 \\ 23 \end{array} \quad \begin{array}{r} -9 \\ 1 \\ \hline 6 \\ 7 \end{array} \quad \begin{array}{r} -17 \\ 3 \\ \hline 5 \\ 8 \end{array}$$

COMMENTS & EXTENSIONS: Students may have trouble seeing that adding 3 to 7 is what gets Susan to 10. You may want to guide them through this first step and allow them to puzzle out the next steps (adding 10 to get to 20 and a final 4 to reach 24). While this is not the traditional method for subtraction, can you think of times when this would be useful?



Use this "count-up" method to figure out how old George Washington would be if he were alive today. He was born in 1732.

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Susan has a homemade method for subtraction.

$$\begin{array}{r} 24 \\ - 7 \\ \hline 3 \text{ (gets me to 10)} \\ 10 \text{ (gets me to 20)} \\ \hline 4 \text{ (gets me to 24)} \\ 17 \end{array}$$

Try Susan's method to solve these.

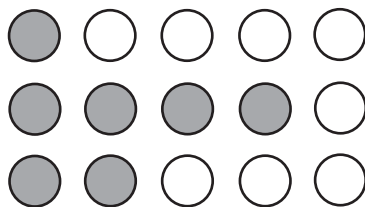
a. $\begin{array}{r} 24 \\ - 9 \\ \hline \end{array}$

b. $\begin{array}{r} 30 \\ - 7 \\ \hline \end{array}$

c. $\begin{array}{r} 16 \\ - 9 \\ \hline \end{array}$

d. $\begin{array}{r} 25 \\ - 17 \\ \hline \end{array}$

ANSWER: Sample:



COMMENTS & EXTENSIONS: Write an equation for each line. For instance, the example of 3 gray and 2 white can be $2 + 3 = 5$.



How many different ways can you color the circles? If there were 6 circles, how many different ways could you color them? 7 circles?

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Here are 5 circles. Notice that 3 are gray, and 2 are white.



Show different ways you can color each row of circles using gray and white.

