

$$\begin{array}{r} 1) \quad x + 15 = 96 \\ \quad -15 \quad -15 \quad (SPE) \\ \hline \boxed{x = 81} \end{array}$$

$$\begin{array}{r} 2) \quad 82 + y = 11 \\ \quad -82 \quad -82 \quad (SPE) \\ \hline \boxed{y = -71} \end{array}$$

$$\begin{array}{r} 3) \quad 5x = -8 \\ \quad \frac{5}{5} \quad \frac{5}{5} \quad (DPE) \\ \hline \boxed{x = -\frac{8}{5} \text{ or } -1\frac{3}{5}} \end{array}$$

$$\begin{array}{r} 4) \quad \frac{a}{6} = 12 \\ \quad \times 6 \quad \times 6 \quad (MPE) \\ \hline \boxed{a = 72} \end{array}$$

$$\begin{array}{r} 5) \quad -4y - 16 = 36 \\ \quad +16 \quad +16 \quad (APE) \\ \hline -4y = 52 \\ \quad -4 \quad -4 \quad (DPE) \\ \hline \boxed{y = -13} \end{array}$$

$$\begin{array}{r} 6) \quad 81 = 2n - 36 \\ \quad +36 \quad +36 \quad (APE) \\ \hline 117 = 2n \\ \quad \frac{117}{2} \quad \frac{2}{2} \quad (DPE) \\ \hline \boxed{\frac{117}{2} \text{ or } 58.5 = n} \end{array}$$

$$\begin{array}{r} 7) \quad \frac{x}{6} + 15 = -15 \\ \quad -15 \quad -15 \quad (SPE) \\ \hline \frac{x}{6} = -30 \\ \quad \times 6 \quad \times 6 \quad (MPE) \\ \hline \boxed{x = -180} \end{array}$$

$$\begin{array}{r} 8) \quad 11 = \frac{b}{-5} - 18 \\ \quad +18 \quad +18 \quad (APE) \\ \hline 29 = \frac{b}{-5} \\ \quad -5 \quad -5 \quad (MPE) \\ \hline \boxed{-145 = b} \end{array}$$

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"I feel better today too, but around here
I've learned not to be too optimistic."

When solving one and two step linear equations, remember to show your transformation lines and properties of equality to earn maximum credit on the test

$$\begin{array}{r} 1) \quad x + 6 = 10 \\ \quad -6 \quad -6 \quad (\text{SPF}) \\ \hline \boxed{x = 4} \end{array}$$

$$\begin{array}{r} 2) \quad a - 9 = 15 \\ \quad +9 \quad +9 \\ \hline \boxed{a = 24} \end{array}$$

$$\begin{array}{r} 3) \quad 3p = 27 \\ \quad \overline{3} \quad \overline{3} \quad (\text{DPF}) \\ \hline \boxed{p = 9} \end{array}$$

$$\begin{array}{r} 4) \quad \frac{t}{5} = 4 \\ \quad \times 5 \quad \times 5 \quad (\text{MPF}) \\ \hline \boxed{t = 20} \end{array}$$

$$\begin{array}{r} 5) \quad x - 9 = -15 \\ \quad +9 \quad +9 \quad (\text{APF}) \\ \hline \boxed{x = -6} \end{array}$$

$$\begin{array}{r} 6) \quad -18 = -4x \\ \quad \overline{-4} \quad \overline{-4} \quad (\text{DPF}) \\ \hline \boxed{\frac{-18}{-4} = \frac{9}{2} = 4\frac{1}{2} = x} \end{array}$$

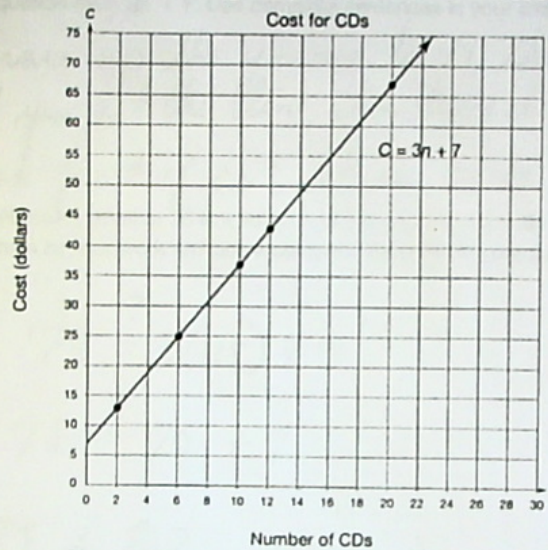
$$\begin{array}{r} 7) \quad \frac{1}{7}x = -4 \\ \quad \times 7 \quad \times 7 \quad (\text{MPF}) \\ \hline \boxed{x = -28} \end{array}$$

$$\begin{array}{r} 8) \quad x - 11 = -51 \\ \quad +11 \quad +11 \quad (\text{APF}) \\ \hline \boxed{x = -62} \end{array}$$



Read the scenario below. Use the scenario to answer Questions 9 and 10.

An online music store is selling CDs for \$3 a piece and charges a flat shipping fee of \$7. The cost C for buying n CDs is given by the equation $C = 3n + 7$. Below is a graph of this equation.



McHUMOR.com by T. McCracken



"List the constitutional amendments in any order? Hmm...4th, 10th...umm...6th, 8th, 5th ..."

©T. McCracken mchumor.com

9. Explain how you would use the graph to determine whether 14 is a solution to the equation $49 = 3n + 7$. Use complete sentences in your answer.

Trace up the y-axis to 49, then go across right until you hit the line, then trace down to the x-axis & look for # of CDs. It is, so 14 is a solution.

10. Determine whether 25 is a solution of the equation $75 = 3n + 7$ algebraically. Show all your work and use a complete sentence in your answer.

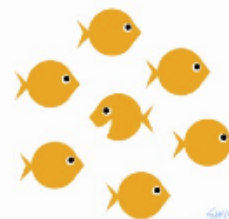
$$75 \stackrel{?}{=} 3(25) + 7$$

$$75 \stackrel{?}{=} 75 + 7$$

$$75 \neq 82$$

Thus 25 is not a solution of the equation.

There's always one



Be the one

bedspreads. The interior decorator will need a total of 362 bedspreads for all of the beds in the hotel. The company can produce three and a half bedspreads each day.

- 12 Write an equation that represents the number of completed bedspreads b in terms of the number of days d .

$$b = 14 + 3.5d$$

- 13 Complete the table of values that shows the relationship between the number of completed bedspreads.

| Labels | Time | Completed bedspreads |
|-------------|------|----------------------|
| Units | days | bedspreads |
| Expressions | d | $14 + 3.5d$ |
| | 0 | 14 |
| | 5 | 31.5 |
| | 10 | 49 |
| | 25 | 101.5 |
| | 50 | 189 |

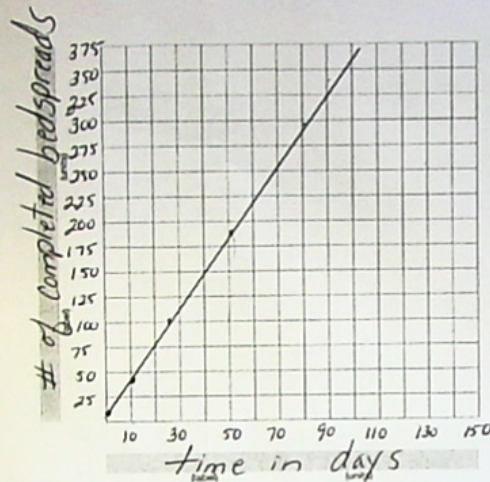
$$\rightarrow 14 + 3.5(5)$$



- 14 Use the grid on the next page to create a graph of the data from the table in Question 22. First, choose your bounds and intervals. Be sure to label your graph clearly.

| Variable quantity | Lower bound | Upper bound | Interval |
|-------------------|-------------|-------------|----------|
| days | 0 | 150 | 10 |
| bedspreads | 0 | 375 | 25 |

(answers vary)



15 Use your graph to estimate when 7 bedspreads were completed. Use a complete sentence to explain how you found your answer.

The company already has 14 bedspreads completed, so $(0, 14)$ is start. There no time need to get 7.

