

2. Tom needs to cut a 6-foot board (72 inches) into two pieces. The longer piece is to be 12 inches less than three times the shorter piece. What is to be the length of each piece?

$3x-12$ (circled) x (circled) No legend (-2)
 These do not count as a legend
 good solving of equation

$$\begin{aligned} x + 3x - 12 &= 72 \\ 4x - 12 &= 72 \\ +12 &= +12 \\ \hline 4x &= 84 \\ x &= 21 \end{aligned}$$

$$\begin{aligned} 3(21) - 12 \\ 63 - 12 \\ 51 \end{aligned}$$

short	long	Total	
x	$3x-12$	72	

No sentence (-1)

Sentence: Shorter = 21 longer = 51 No units of measure (-1)

#2 Score: 6/10

3. Uncle Harry has three nieces. In his will, he decides to give Janet \$10,000 more than he gives Nancy, and to give Cathy twice as much as he gives to Janet. If Harry's will leaves \$92,000 to the three nieces, how much will each niece receive?

$x + x + 10,000 + 2x = 92,000$ (circled) Cathy: should be $2(x + 10,000)$ (-2)
 No legend (-3)
 good solving of equation

$$\begin{aligned} 4x + 10,000 &= 92,000 \\ -10,000 &= -10,000 \\ \hline 4x &= 82,000 \\ \frac{4x}{4} &= \frac{82,000}{4} \\ x &= 20,500 \end{aligned}$$

$$\begin{aligned} x + 10,000 &= 30,500 \\ 2x &= 41,000 \end{aligned}$$

$$\begin{array}{r} 20,500 \\ 4 \overline{) 82,000} \\ \underline{-8} \\ 20 \end{array}$$

No sentence (-1)

Sentence: Nancy = \$20,500 Janet = \$30,500 Cathy = \$41,000

These numbers are wrong; based on equation, though, the solving is good, so, no points taken off for incorrect values.

#3 Score: 4/10