

HW Solutions

(4)

	\$	#	total
25¢	25	x	25x
40¢	40	15-x	600-40x

7 25¢ stamps
8 40¢ stamps

$$25x + 600 - 40x = 495$$

$$\begin{array}{r} 25x + 600 - 40x = 495 \\ -600 \qquad \qquad -600 \\ \hline -15x = -105 \\ \frac{-15x}{-15} = \frac{-105}{-15} \quad x = 7 \end{array}$$

②

	\$	#	total\$
D	10	$2q$	$20q$
Q	25	q	$25q$

14 quantities
28 times

$$\begin{aligned}20q + 25q &= 630 \\45q &= 630 \\ \hline 45 & \quad 45 \\ \hline q &= 14\end{aligned}$$

⑩

	begin	end
A	a 25	$2a$
S	$24-a$ -1	$21-a$

$$\begin{array}{r}
 2a + 21 - a = 46 \\
 -21 \quad -21 \\
 \hline
 a = 25
 \end{array}$$

46

no solution

(10)

	\$	#	total \$
N	5	n	
D	10	n+q+7	
Q	25	q	

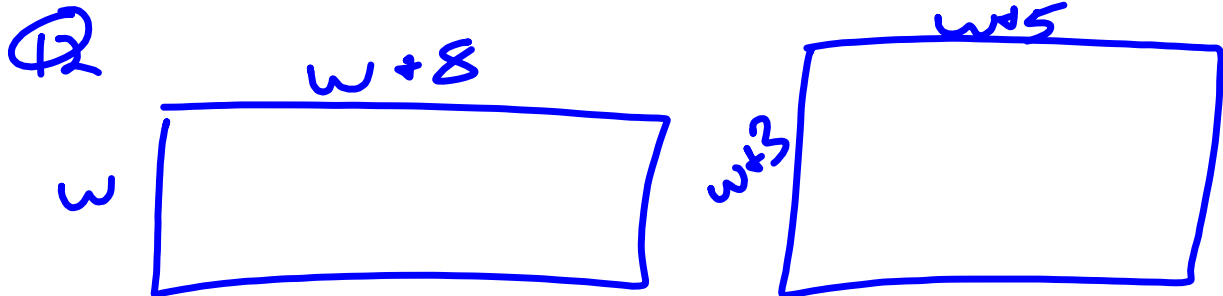
no solution
not enough info

⑧ sandwich $\rightarrow 3m$ $3m+20$
salad $\rightarrow 2m+20$ $3m+20=3m$
milk $\rightarrow m$ m

$$3m = m + 2m + 20$$

$$\begin{array}{r} 3m = 3m + 20 \\ -3m \quad -3m \\ \hline 0 = 20 \end{array}$$

no solution



$$(w+3)(w+5) - w(w+8) = 4$$

$$\cancel{w^2} + 8w + 15 - \cancel{w^2} - 8w = 4$$

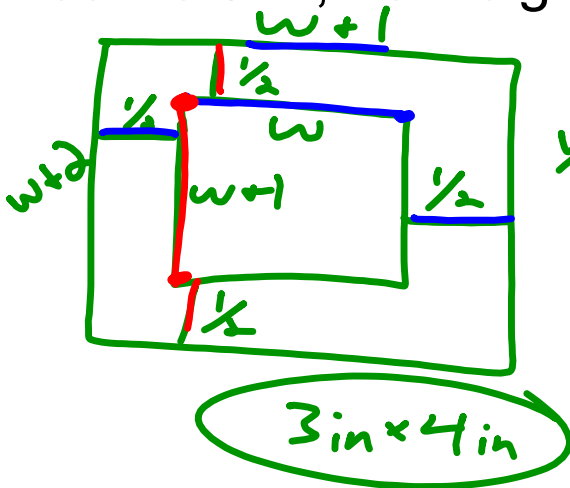
$$15 = 4$$

no solution

Quiz Solutions

Reminder: I am available for extra help on
Monday

A picture is 1in longer than it is wide. It is put into a frame 1/2in wide. If the area of the frame itself is 8in^2 , how big is the picture?



$$\begin{aligned}
 (w+2)(w+1) - w(w+1) &= 8 \\
 w^2 + 3w + 2 - w^2 - w &= 8 \\
 2w + 2 &= 8 \\
 -2 &-2 \\
 \hline
 2w &= 6 \\
 \frac{2w}{2} &= \frac{6}{2} \\
 w &= 3
 \end{aligned}$$

Roy says he has more nickels than dimes. If he has \$5.20, how many of each coin does he have?

	\$	#	total \$
N	5		
D	10		

no solution
not enough info

Esteban has 16 coins that total \$3.00. If he has only nickels and quarters, how many quarters does he have?

	\$	#	total \$
N	5	n	$5n$
Q	25	$16-n$	$400-25n$

11 quarters

$$\begin{array}{r}
 5n + 400 - 25n = 300 \\
 \underline{-400} \qquad \qquad \underline{-400} \\
 -20n = -100 \quad n=5 \\
 \underline{-20} \qquad \qquad \underline{-20}
 \end{array}$$

Jamie ran two laps around a track in 99s. How long did it take him to run each lap if he ran the first lap at 8.5m/s and the second at 8.0m/s?

A ship must average 22 knots (nautical miles per hour) to make its 10-hour run on schedule. During the first four hours, bad weather caused it to reduce speed to 16 knots. What should its average speed be for the rest of the trip to maintain its schedule?

A corner lot that originally was square lost 185m^2 of area when one of the adjacent streets was widened by 3m and the other was widened by 5m. Find the new dimensions of the lot.

