

HW Solutions

9

	val	#	total val
N	5	n	5n
D	10	52-n	520-10n

$$\begin{array}{r} 5n + 520 - 10n = 450 \\ -5n \quad -520 \quad -520 \end{array}$$

14 nickels

$$\begin{array}{r} -5n = -70 \\ \hline -5 \quad -5 \\ \hline n = 14 \end{array}$$

⑥

70¢

	#	\$	total \$
B	12	b	12b
S	10	b+20	10b+200

$$10b + 200 - 12b = 100$$

$$\begin{array}{r} -200 \\ -200 \end{array}$$

$$\frac{-2b}{-2} = \frac{-100}{-2} \quad b = 50$$

(12)

	\$/h	h	total \$
AS	a	10	10a
S	a+2	8	8a+16

$$10a + 8a + 16 = 142$$

$$\frac{18a}{18} = \frac{126}{18} \quad a = 7$$

\$7/h

①

	\$/h	h	total \$
P	$a+4.5$	8	$8a+36$
A	a	8	$8a$

$$8a + 36 + 8a = 372$$

$$\begin{array}{r} 8a + 36 + 8a = 372 \\ -36 \\ \hline 16a = 336 \\ = \frac{336}{16} \end{array}$$

Apprentices \rightarrow \$21/h
 Plumbers \rightarrow \$25.50/h

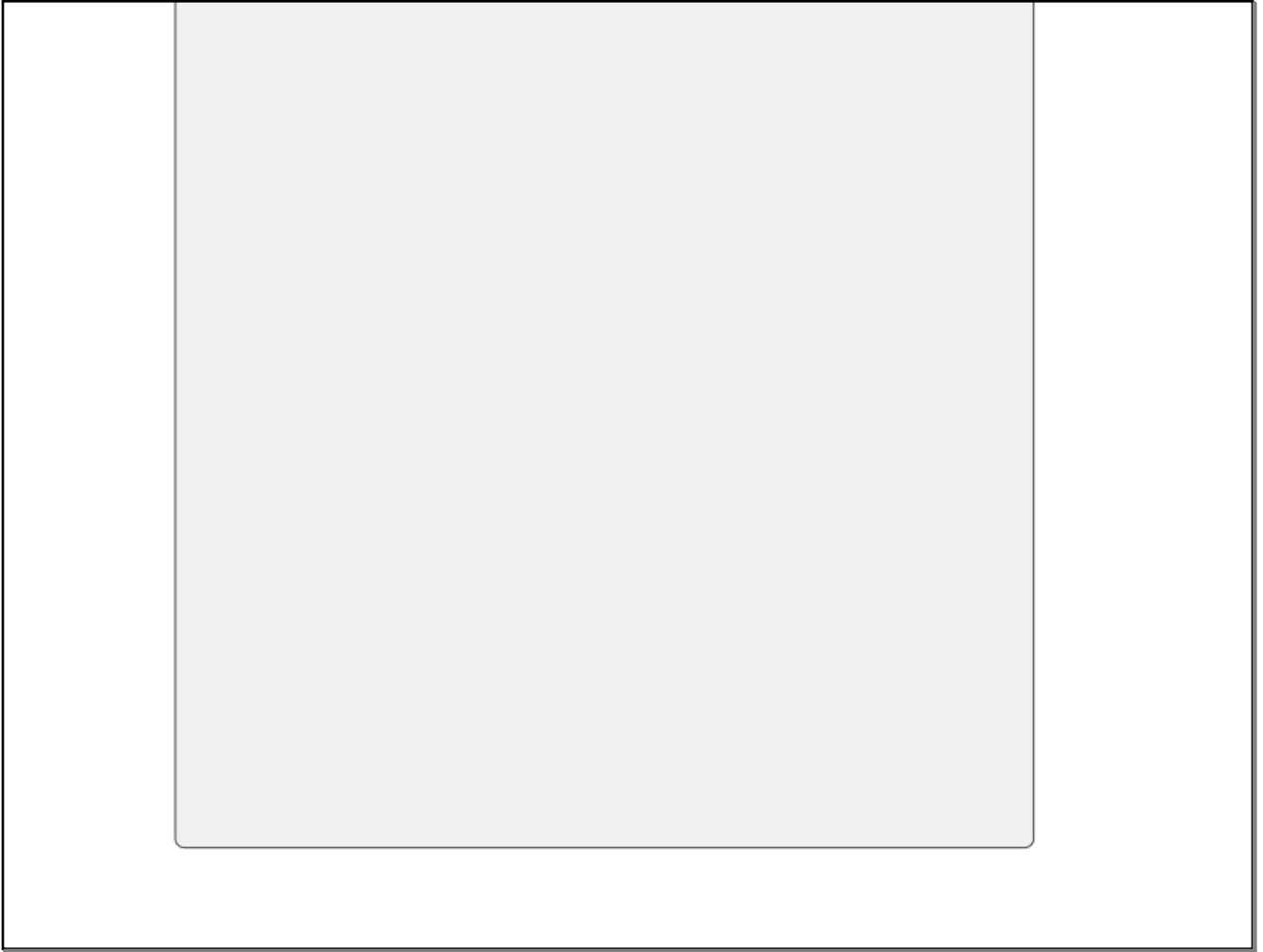
$$a = 21$$

⑤

	\$	#	total \$
D	10	d	$10d$
Q	25	$d+8$	$25d+200$

$$\begin{array}{r}
 10d + 25d + 200 = 620 \\
 - 200 - 200 \\
 \hline
 35d = 420 \quad d = 12
 \end{array}$$

12 times



Solve.

$$\begin{array}{r} 2(6x - 3) = 3(4x + 7) \\ 12x - 6 = 12x + 21 \\ -12x \quad -12x \\ \hline -6 = 21 \\ \text{no solution} \end{array}$$

Emily's last three test scores were consecutive odd integers. If the next test score is 18 points more than the highest score of the three tests, her total points will be 328. Find Emily's test scores.

$$x + x + 2 + x + 4 + x + 22 = 328$$

$$4x + 28 = 328$$

$$\begin{array}{r} 4x + 28 = 328 \\ -28 \quad -28 \\ \hline 4x = 300 \\ \frac{4}{4} \quad \frac{4}{4} \\ \hline x = 75 \end{array}$$

75, 77, 79

Josh earns \$3/hr working after school and \$4/hr working on Saturdays. Last week he earned \$43, working a total of 13 hours. How many hours did he work on Saturday?

	\$/h	h	Total \$
AS	3	a	3a
S	4	13-a	52-4a

$$3a + 52 - 4a = 43$$

$$-a + 52 = 43$$

$$-52 - 52$$

$$-a = -9$$

$$\frac{-a}{-1} = \frac{-9}{-1} \quad a = 9$$

4h

Solve for m . State any restrictions.

$$\frac{2x \neq 0}{2} \quad \frac{2}{2} \quad \frac{f = cn + mt}{x \neq 0}$$

$$\frac{-cn - cn}{f - cn = m \downarrow}$$

$$\frac{f - cn}{\downarrow} = m ; \downarrow \neq 0$$

$$\frac{x + 5 \neq 0}{-5 \quad -5} \\ \hline x \neq -5$$

$$a = \frac{x+y}{w+b}$$

$$\begin{array}{r} w+b \neq 0 \\ \hline -b \quad -b \\ \hline w \neq -b \end{array}$$

$$4|x| - 5 = 15$$

$$\begin{array}{r} +5 \quad +5 \\ \hline 4|x| = 20 \\ \hline 4 \quad 4 \end{array}$$

$$\hline |x| = 5$$

$$\hline x = \pm 5$$

Solve.

$$\begin{aligned} & -12x - 2(3x + 4) + 4(2x - 7) = 4 \\ & -12x - 6x - 8 + 8x - 28 = 4 \\ & -10x - 36 = 4 \\ & \quad \quad \quad +36 \quad +36 \\ \hline & -10x = 40 \\ & \frac{-10x}{-10} = \frac{40}{-10} \quad \boxed{x = -4} \end{aligned}$$

Maggie paid \$1.50 per dozen for some flowers. She sold all but 5 dozen of them for \$2 per dozen, making a profit of \$18. How many dozen flowers did she buy?

$$3 + |2x - 1| = 14$$

$$\begin{array}{c} -3 \qquad \qquad -3 \\ \hline \end{array}$$

$$|2x - 1| = 11$$

$$2x - 1 = 11$$

$$2x - 1 = -11$$

Solve.

$$9m + 3 = 6m + 21$$

Ron has 28 dimes and quarters worth a total of \$4.75. How many of each type of coin does he have?

$$5 - \frac{2}{3}(x + 2) = 9$$

Solve for z . State any restrictions.

$$m = \frac{x + y + z}{3}$$

Solve.

$$\frac{2x - 5}{3} = 7$$

