

Algebra Review ~ Developing

A1 ~ Student can solve simple, multi-step, one-variable linear equations (variable on one side, no distribution).

$$1) 11 = \frac{n}{2} + 6$$

$$\begin{array}{l} -6 \quad -6 \quad \rightarrow \quad 5 = \frac{n}{2} \\ \{10\} \quad \quad \quad \times 2 \quad \times 2 \end{array}$$

$$\boxed{10 = n}$$

$$2) 8 + \frac{n}{4} = 13$$

$$\begin{array}{l} -8 \quad -8 \quad \rightarrow \quad \frac{n}{4} = 5 \\ \{20\} \quad \quad \quad \times 4 \quad \times 4 \end{array}$$

$$\boxed{n = 20}$$

$$3) 66 = 10 + 7x$$

$$\begin{array}{l} -10 \quad -10 \quad \rightarrow \quad \frac{56}{7} = \frac{7x}{7} \\ \{8\} \end{array}$$

$$\boxed{8 = x}$$

$$4) 6a - 9 = 69$$

$$\begin{array}{l} +9 \quad +9 \quad \rightarrow \quad \frac{6a}{6} = \frac{78}{6} \\ \{13\} \end{array}$$

$$\boxed{a = 13}$$

$$5) -53 = 5b + 2$$

$$\begin{array}{l} -2 \quad -2 \quad \rightarrow \quad \frac{-55}{5} = \frac{5b}{5} \\ \{-11\} \end{array}$$

$$\boxed{-11 = b}$$

$$6) 26 = 3n + 5$$

$$\begin{array}{l} -5 \quad -5 \quad \rightarrow \quad \frac{21}{3} = \frac{3n}{3} \\ \{7\} \end{array}$$

$$\boxed{7 = n}$$

$$7) 1 + \frac{k}{8} = -1$$

$$\begin{array}{l} -1 \quad -1 \quad \rightarrow \quad \frac{k}{8} = -2 \\ \{-16\} \quad \quad \quad \times 8 \quad \times 8 \end{array}$$

$$\boxed{k = -16}$$

$$8) 3 = \frac{m}{5} + 6$$

$$\begin{array}{l} -6 \quad -6 \quad \rightarrow \quad -3 = \frac{m}{5} \\ \{-15\} \quad \quad \quad \times 5 \quad \times 5 \end{array}$$

$$\boxed{-15 = m}$$

$$9) -10x + 7 = -153$$

$$\begin{array}{l} -7 \quad -7 \quad \rightarrow \quad \frac{-10x}{-10} = \frac{-160}{-10} \\ \{16\} \end{array}$$

$$\boxed{16 = x}$$

$$10) 5a + 5 = -10$$

$$\begin{array}{l} -5 \quad -5 \quad \rightarrow \quad \frac{5a}{5} = \frac{-15}{5} \\ \{-3\} \end{array}$$

$$\boxed{a = -3}$$

$$11) \frac{x}{9} - 5 = -4$$

$$\begin{array}{l} +5 \quad +5 \quad \rightarrow \quad \frac{x}{9} = 1 \\ \{9\} \quad \quad \quad \times 9 \quad \times 9 \end{array}$$

$$\boxed{x = 9}$$

$$12) -1 = -1 + \frac{x}{1}$$

$$\begin{array}{l} +1 \quad +1 \quad \rightarrow \quad 0 = \frac{x}{1} \\ \{0\} \quad \quad \quad \times 1 \quad \times 1 \end{array}$$

$$\boxed{0 = x}$$

$$13) -18 = -5 - x$$

$$\begin{array}{l} +5 \quad +5 \quad \rightarrow \quad \frac{-13}{-1} = \frac{-x}{-1} \\ \{13\} \end{array}$$

$$\boxed{13 = x}$$

$$14) -x - 7 = -5$$

$$\begin{array}{l} +7 \quad +7 \quad \rightarrow \quad \frac{-x}{-1} = \frac{2}{-1} \\ \{-2\} \end{array}$$

$$\boxed{x = -2}$$

A2 ~ Student can solve multi-step, one-variable linear equations that involve distribution and combining of like terms.

$$15) 62 = -2(-5n - 6)$$

$$\begin{aligned} \{5\} \quad & 62 = 10n + 12 \\ & -12 \quad -12 \\ & \frac{50}{10} = \frac{10n}{10} \\ & \boxed{5 = n} \end{aligned}$$

$$17) -64 = 2(-5p - 2)$$

$$\begin{aligned} \{6\} \quad & -64 = -10p - 4 \\ & +4 \quad +4 \\ & -60 = -10p \\ & \frac{-60}{-10} = \frac{-10p}{-10} \\ & \boxed{6 = p} \end{aligned}$$

$$19) -n - 5 - 5 = 5 - 4n$$

$$\begin{aligned} \{5\} \quad & -n - 10 = 5 - 4n \\ & +n \quad +n \\ & -10 = 5 - 3n \\ & -5 \quad -5 \\ & -15 = -3n \rightarrow \boxed{n = 5} \end{aligned}$$

$$21) -5b - 5 = -11 - 6b$$

$$\begin{aligned} \{6\} \quad & -5b - 5 = -11 - 6b \\ & +5b \quad +5b \\ & -5 = -11 - 1b \\ & +11 \quad +11 \\ & \frac{6}{-1} = \frac{-b}{-1} \\ & \boxed{-6 = b} \end{aligned}$$

$$23) -4 - (1 - 3a) = -4a + 9$$

$$\begin{aligned} \{2\} \quad & -4 - 1 + 3a = -4a + 9 \\ & -5 + 3a = -4a + 9 \\ & +4a \quad +4a \\ & -5 + 7a = 9 \\ & +5 \quad +5 \\ & \frac{7a}{7} = \frac{14}{7} \rightarrow \boxed{a = 2} \end{aligned}$$

$$25) -28 - x = 4(6x + 6) + x$$

$$\begin{aligned} \{-2\} \quad & -28 - x = 24x + 24 + x \\ & -28 - x = 25x + 24 \\ & +x \quad +x \\ & -28 = 26x + 24 \\ & -24 \quad -24 \\ & -52 = \frac{26x}{26} \rightarrow \boxed{-2 = x} \end{aligned}$$

$$16) -65 = -5(1 - 2n)$$

$$\begin{aligned} \{-6\} \quad & -65 = -5 + 10n \\ & +5 \quad +5 \\ & -60 = 10n \\ & \frac{-60}{10} = \frac{10n}{10} \\ & \boxed{-6 = n} \end{aligned}$$

$$18) 5(-2b + 3) = 75$$

$$\begin{aligned} \{-6\} \quad & -10b + 15 = 75 \\ & -15 \quad -15 \\ & -10b = 60 \\ & \frac{-10b}{-10} = \frac{60}{-10} \\ & \boxed{b = -6} \end{aligned}$$

$$20) 1 + 2 - m + 4 = 1 + m$$

$$\begin{aligned} \{3\} \quad & 7 - m = 1 + m \\ & +m \quad +m \\ & 7 = 1 + 2m \\ & -1 \quad -1 \\ & \frac{6}{2} = \frac{2m}{2} \rightarrow \boxed{3 = m} \end{aligned}$$

$$22) -6 - 2a + 6 - 12 = 3 + a$$

$$\begin{aligned} \{-5\} \quad & -2a - 12 = 3 + a \\ & +2a \quad +2a \\ & -12 = 3 + 3a \\ & -3 \quad -3 \\ & -15 = \frac{3a}{3} \\ & \frac{-15}{3} = \frac{3a}{3} \\ & \boxed{-5 = a} \end{aligned}$$

$$24) -5(2n - 6) - 2n = -21 + 5n$$

$$\begin{aligned} \{3\} \quad & -10n + 30 - 2n = -21 + 5n \\ & -12n + 30 = -21 + 5n \\ & +12n \quad +12n \\ & 30 = -21 + 17n \\ & +21 \quad +21 \\ & \frac{51}{17} = \frac{17n}{17} \rightarrow \boxed{n = 3} \end{aligned}$$

$$26) -n - 20 = -3(n + 4)$$

$$\begin{aligned} \{4\} \quad & -n - 20 = -3n - 12 \\ & +3n \quad +3n \\ & 2n - 20 = -12 \\ & +20 \quad +20 \\ & \frac{2n}{2} = \frac{8}{2} \\ & \boxed{n = 4} \end{aligned}$$

One-Step Equations - Integers

Add/Sub: S3

- 1) Tom has 25 bumblebee marbles and Marcus has a few more than Tom. If they have 56 marbles in all, how many bumblebee marbles does Marcus have?

Let $m = \#$ of marbles Marcus has.

Then $25 + m = 56$

$m = 31 \rightarrow$ Marcus has 31 marbles.

- 2) A lecture was attended by 95 people in the university auditorium. Eleven of them were students who had volunteered to manage the event and the rest were senior professors. How many senior professors attended the lecture?

Let $s = \#$ of senior professors.

Then $11 + s = 95$

$s = 84 \rightarrow$ There were 84 senior professors.

- 3) Louise has 500 cents in her piggy bank. Uncle Jim gave her a few cents on his visit. If Louise has 765 cents, how many cents did Uncle Jim give her?

Let $c = \#$ of cents Uncle Jim gave Louise.

Then $500 + c = 765$

$c = 265 \rightarrow$ Uncle Jim gave Louise 265¢.

- 4) James purchases tickets for the New York Knicks. He gives seven tickets to his colleagues. If James is left with 8 tickets, how many tickets did he purchase?

Let $t = \#$ of tickets James purchased.

Then $t - 7 = 8$

$t = 15 \rightarrow$ James bought 15 tickets.

- 5) Ruby has to climb 36 steps to reach her apartment, on the third floor of the residential complex. She climbs 18 steps and reaches the second floor. How many more steps should she climb to reach her apartment?

Let $s = \#$ of steps from 2nd floor to 3rd floor.

Then $36 - s = 18$

$s = 18 \rightarrow$ Ruby must climb 18 more steps.

One-Step Equations - Integers

Mul/Div: S3

- 1) Apples picked from an orchard are put into 5 sacks and are loaded into a small truck. If each sack contains 76 apples, how many apples are there in all?

Let $a = \#$ of apples (total).

Then $\frac{a}{5} = 76$

$a = 380 \rightarrow$ There are 380 apples in total.

- 2) If Joe earns an annual salary of \$72000, calculate his monthly income.

Let $m =$ Joe's monthly income.

Then $12m = 72\ 000$

$m = 600 \rightarrow$ Joe earns \$600 per month

- 3) A group of students from Bethany's are taken for a counseling session. They are seated across eight classrooms. If each classroom has 33 students, how many students attended the session in all?

Let $n = \#$ of students in the session.

Then $\frac{n}{8} = 33$

$n = 264 \rightarrow$ The total number of students who attended the session was 264.

- 4) Betty is a swimming instructor. She is in charge of 5 batches of children. If there are 35 children in all, how many children does Betty instruct per batch?

Let $c = \#$ of children in each batch.

Then $5c = 35$

$c = 7 \rightarrow$ Betty has 7 children per batch.

- 5) Andrew paid \$72 as bike rental charges. If he is billed at \$8 an hour, how many hours has he used the bike for?

Let $h = \#$ of hours the bike is used for.

Then $8h = 72$

$h = 9 \rightarrow$ Andrew used the bike for 9 hours.

Algebra Review ~ Proficient

A1 ~ Student can solve simple, multi-step, one-variable linear equations (variable on one side, no distribution).

1) $-182 = -10n + 8$

$$\begin{array}{r} -8 \\ \{19\} \\ -190 = -10n \\ \hline -10 \quad -10 \\ \boxed{19 = n} \end{array}$$

2) $-10 = -8 + \frac{x}{-3}$

$$\begin{array}{r} +8 \quad +8 \\ \{6\} \\ -2 = \frac{x}{-3} \\ \hline \times(-3) \quad \times(-3) \\ \boxed{6 = x} \end{array}$$

3) $15 = -4x + 7$

$$\begin{array}{r} -7 \\ \{-2\} \\ 8 = -4x \\ \hline -4 \quad -4 \\ \boxed{-2 = x} \end{array}$$

4) $37 = -2 - 3x$

$$\begin{array}{r} +2 \quad +2 \\ \{-13\} \\ 39 = -3x \\ \hline -3 \quad -3 \\ \boxed{-13 = x} \end{array}$$

5) $13 = -5 - x$

$$\begin{array}{r} +5 \quad +5 \\ \{-18\} \\ 18 = -x \\ \hline -1 \quad -1 \\ \boxed{-18 = x} \end{array}$$

6) $-7 = \frac{p}{3} - 1$

$$\begin{array}{r} +1 \quad +1 \\ \{-18\} \\ -6 = \frac{p}{3} \\ \hline \times 3 \quad \times 3 \\ \boxed{-18 = p} \end{array}$$

7) $11 = 10 + \frac{p}{-6}$

$$\begin{array}{r} -10 \quad -10 \\ \{-6\} \\ 1 = \frac{p}{-6} \\ \hline \times(-6) \quad \times(-6) \\ \boxed{-6 = p} \end{array}$$

8) $7 = 9 + \frac{b}{-8}$

$$\begin{array}{r} -9 \quad -9 \\ \{16\} \\ -2 = \frac{b}{-8} \\ \hline \times(-8) \quad \times(-8) \\ \boxed{16 = b} \end{array}$$

9) $\frac{n+7}{9} = -1$

$$\begin{array}{r} \times 9 \quad \times 9 \\ \{-16\} \\ n+7 = -9 \\ \hline -7 \quad -7 \\ \boxed{n = -16} \end{array}$$

10) $13 = \frac{a+7}{2}$

$$\begin{array}{r} \times 2 \quad \times 2 \\ \{19\} \\ 26 = a+7 \\ \hline -7 \quad -7 \\ \boxed{19 = a} \end{array}$$

11) $11 = 3 + \frac{k}{-2}$

$$\begin{array}{r} -3 \quad -3 \\ \{-16\} \\ 8 = \frac{k}{-2} \\ \hline \times(-2) \quad \times(-2) \\ \boxed{-16 = k} \end{array}$$

12) $7 - n = 15$

$$\begin{array}{r} +7 \\ \{-8\} \\ -7 \rightarrow -n = 8 \\ \hline -1 \quad -1 \\ \boxed{n = -8} \end{array}$$

13) $1 = \frac{5+p}{-4}$

$$\begin{array}{r} \times(-4) \quad \times(-4) \\ \{-9\} \\ -4 = 5+p \\ \hline -5 \quad -5 \\ \boxed{-9 = p} \end{array}$$

14) $\frac{10+m}{-2} = -7$

$$\begin{array}{r} \times(-2) \quad \times(-2) \\ \{4\} \\ 10+m = 14 \\ \hline -10 \quad -10 \\ \boxed{m = 4} \end{array}$$

A2 ~ Student can solve multi-step, one-variable linear equations that involve distribution and combining of like terms.

15) $3 = 3x + 2 - 2x$

{1} $3 = x + 2$
 $-2 \quad -2$

$1 = x$

17) $224 = -7(5n + 3)$

{-7} $224 = -35n - 21$
 $+21 \quad +21$

$\frac{245}{-35} = \frac{-35n}{-35}$

$-7 = n$

19) $118 = -7(7p - 2) - 3p$

{-2} $118 = -49p + 14 - 3p$
 $118 = -52p + 14$
 $-14 \quad -14$

$\frac{104}{-52} = \frac{-52p}{-52} \rightarrow$

$p = -2$

21) $68 = -(-8x - 4) - 3(x - 8)$

{8} $68 = 8x + 4 - 3x + 24$
 $68 = 5x + 28$
 $-28 \quad -28$

$\frac{40}{5} = \frac{5x}{5} \rightarrow$

$x = 8$

23) $-2(1 + 4a) = 33 - 3a$

{-7} $-2 - 8a = 33 - 3a$
 $+8a \quad +8a$

$-2 = 33 + 5a$
 $-33 \quad -33$

$\frac{-35}{5} = \frac{5a}{5} \rightarrow$

$a = -7$

25) $5(x + 4) = 13 + 6x$

{7} $5x + 20 = 13 + 6x$
 $-5x \quad -5x$

$20 = 13 + x$
 $-13 \quad -13$

$7 = x$

27) $2n + 6(n + 5) = -2(3n + 6)$

{-3} $2n + 6n + 30 = -6n - 12$

$8n + 30 = -6n - 12$
 $+6n \quad -30 \quad +6n \quad -30$

$\frac{14n}{14} = \frac{-42}{14}$

$n = -3$

16) $6 = 3p - 4 + 7$

{1} $6 = 3p + 3$
 $-3 \quad -3$

$\frac{3}{3} = \frac{3p}{3}$

$1 = p$

18) $-8(4b - 8) = -96$

{5} $-32b + 64 = -96$
 $-64 \quad -64$

$\frac{-32b}{-32} = \frac{-160}{-32}$

$b = 5$

20) $5(-5 + 2n) - 4 = -109$

{-8} $-25 + 10n - 4 = -109$
 $10n - 29 = -109$
 $+29 \quad +29$

$\frac{10n}{10} = \frac{-80}{10} \rightarrow$

$n = -8$

22) $7(-2 + 8k) + 8(-3k - 5) = -22$

{1} $-14 + 56k - 24k - 40 = -22$
 $32k - 54 = -22$
 $+54 \quad +54$

$\frac{32k}{32} = \frac{32}{32} \rightarrow$

$k = 1$

24) $1 + 2p = -5 + 6(-6p + 1)$

{0} $1 + 2p = -5 - 36p + 6$
 $+36p \quad +36p$

$1 + 38p = 1$
 $-1 \quad -1$

$\frac{38p}{38} = \frac{0}{38} \rightarrow$

$p = 0$

26) $-1 - 3(3 - 2n) = 4(4 + 8n)$

{-1} $-1 - 9 + 6n = 16 + 32n$
 $-6n \quad -6n$

$-10 = 16 + 26n$
 $-16 \quad -16$

$\frac{-26}{-26} = \frac{26n}{-26} \rightarrow$

$n = -1$

28) $3(6x + 4) = -8(x + 8) + 7x$

{-4} $18x + 12 = -8x - 64 + 7x$
 $18x + 12 = -x - 64$
 $+x \quad +x \quad +x \quad -12$

$19x = -76$

$x = -4$

What Did the Baby Buzzard Say When It Saw an Orange in the Nest?



Solve each problem below. Find your answer in the answer column and notice the letter next to it. Write this letter in each box that contains the number of that problem.

- | | |
|--------------|-----|
| G | 22 |
| D | 60 |
| M | 72 |
| I | 96 |
| H | 15 |
| S | 74 |
| T | 35 |
| L | 320 |
| N | -36 |
| R | 12 |
| E | -21 |
| F | 13 |
| K | 11 |
| C | 342 |
| O | -3 |
| A | 76 |
- 1 Two more than 5 times a number is 77. Find the number. 15 **(H)**
 - 2 Five more than one third of a number is -2. Find the number. -21 **(E)**
 - 3 Nine less than one fourth of a number is 6. Find the number. 60 **(D)**
 - 4 Sixteen increased by twice a number is -56. Find the number. -36 **(N)**
 - 5 Twelve decreased by 8 times a number is 36. Find the number. -3 **(O)**
 - 6 One eighth of a number, increased by 20, is 32. Find the number. 96 **(I)**
 - 7 Twenty-five decreased by one fifth of a number is 18. Find the number. 35 **(J)**
 - 8 Nine times a number, diminished by 4, is 95. Find the number. 11 **(K)**
 - 9 The length of a rectangle is 50 meters. This is 6 meters more than twice the width. Find the width. 22 m **(G)**
 - 10 Grandpa Schmidt is 75 years old. This is 9 years less than seven times the age of Junior Schmidt. How old is Junior? 12 yr **(R)**
 - 11 Bill's weight is 48 kilograms. This is 10 kilograms more than one half of his father's weight. What is his father's weight? 76 kg **(A)**
 - 12 A medium orange has 70 calories. This is 10 calories less than one fourth of the calories in a Sugar Crunchy. How many calories are in a Sugar Crunchy? 320 cal **(L)**
 - 13 The length of a couch is 200 centimeters. This is 16 centimeters less than 3 times the width of a matching chair. How wide is the chair? 72 cm **(M)**

12	5	5	8	11	7	7	1	2	5	10	11	4	9	2	13	11	13	11	12	11	6	3
L	O	O	K	A	T	T	H	E	O	R	A	N	G	E	M	A	M	A	L	A	I	D

What Do They Call Bowling in Hawaii?

Solve each problem below. Then find your solution in the answer column and notice the letter next to it. Write this letter in each box that contains the number of that problem. Aloha-ha-ha!

- (E)** ① The second of two numbers is 4 times the first. Their sum is 50. Find the numbers.

$$n + 4n = 50 \quad n = 10 \quad 4n = 40$$

- (T)** ② The larger of two numbers is 12 more than the smaller. Their sum is 84. Find the numbers.

$$n + (n + 12) = 84 \quad n = 36 \quad n + 12 = 48$$

- (S)** ③ The sum of two numbers is 45. The first is 9 less than the second. Find the numbers.

$$45 = (n - 9) + n \quad n = 27 \quad n - 9 = 18$$

- (O)** ④ The second of two numbers is 5 more than twice the first. Their sum is 80. Find the numbers.

$$n + (2n + 5) = 80 \quad n = 25 \quad 2n + 5 = 55$$

- (I)** ⑤ The larger of two numbers is 1 less than 3 times the smaller. Their sum is 63. Find the numbers.

$$n + (3n - 1) = 63 \quad n = 16 \quad 3n - 1 = 47$$

- (G)** ⑥ Find two numbers whose sum is 92, if the first is 4 more than 7 times the second.

$$92 = (7n + 4) + n \quad n = 11 \quad 7n + 4 = 81$$

- (H)** ⑦ The sum of two numbers is 172. The first is 8 less than 5 times the second. Find the *first* number.

$$172 = (5n - 8) + n \quad n = 30 \quad 5n - 8 = 142$$

- (R)** ⑧ Together, a necklace and a bracelet cost \$192. Find the price of each if the necklace costs 3 times as much as the bracelet.

$$192 = b + 3b \quad b = 48 \quad 3b = 144$$

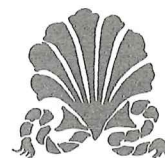
- (N)** ⑨ Grandpa's age is 6 years less than 6 times Junior's age. The sum of their ages is 78. Find each of their ages.

$$(6n - 6) + n = 78 \quad n = 12 \quad 6n - 6 = 66$$

- (L)** ⑩ The first of two films lasted 3 minutes less than twice as long as the second. Together the two films lasted 132 minutes. How long was the *first* film?

$$(2n - 3) + n = 132 \quad n = 45 \quad 2n - 3 = 87$$

<input type="radio"/> A	80, 12
<input checked="" type="radio"/> B	25, 55
<input checked="" type="radio"/> C	87 min
<input checked="" type="radio"/> D	81, 11
<input type="radio"/> E	\$40, \$152
<input type="radio"/> F	30, 50
<input checked="" type="radio"/> G	36, 48
<input checked="" type="radio"/> H	12, 66
<input checked="" type="radio"/> I	16, 47
<input checked="" type="radio"/> J	18, 27
<input type="radio"/> K	84 min
<input checked="" type="radio"/> L	10, 40
<input type="radio"/> M	139
<input checked="" type="radio"/> N	\$48, \$144
<input type="radio"/> O	19, 28
<input checked="" type="radio"/> P	142



8	4	10	10	5	9	6	5	9	2	7	1	5	3	10	1	3
R	O	L	L	I	N	G	I	N	T	H	E	I	S	L	E	S

Algebra Review ~ Extending

A1 ~ Student can solve simple, multi-step, one-variable linear equations (variable on one side, no distribution).

1) $1\frac{1}{2}n - 1\frac{1}{2} = -\frac{3}{8}$

$\left\{\frac{3}{4}\right\}$

2) $-2\frac{3}{4} - 1\frac{4}{5}n = -3\frac{1}{20}$

$\left\{\frac{1}{6}\right\}$

3) $-1\frac{1}{15} = 2\frac{1}{3} - 3\frac{2}{5}r$

$\{1\}$

4) $-\frac{2}{5} - 1\frac{3}{4}r = \frac{11}{60}$

$\left\{-\frac{1}{3}\right\}$

5) $-\frac{3}{2} + 1\frac{1}{2}n = \frac{9}{14}$

$\left\{1\frac{3}{7}\right\}$

6) $-\frac{13}{45} = 2p - \frac{7}{5}$

$\left\{\frac{5}{9}\right\}$

7) $4.28 = 4.2 + \frac{x}{2.5}$

$\{0.2\}$

8) $\frac{-4 + x}{4.6} = -2.5$

$\{-7.5\}$

9) $\frac{4.7 + n}{2} = 0.05$

$\{-4.6\}$

10) $\frac{b}{2.8} - 1.3 = -0.3$

$\{2.8\}$

11) $-40.5 = 4.5n + 0.9$

$\{-9.2\}$

12) $4.46 + \frac{n}{2.35} = 8.46$

$\{9.4\}$

A2 ~ Student can solve multi-step, one-variable linear equations that involve distribution and combining of like terms.

$$13) \frac{89}{210} = -1\frac{1}{5}n + 4\frac{1}{6}n$$

$$\left\{ \frac{1}{7} \right\}$$

$$14) -6.24 = 3.6n - 2n$$

$$\{-3.9\}$$

$$15) -8\left(-\frac{27}{8}x + \frac{13}{7}\right) = 93\frac{1}{7}$$

$$\{4\}$$

$$16) 118.02 = -3.5(-7.4 - 5.6k)$$

$$\{4.7\}$$

$$17) -1\frac{1}{2}\left(-\frac{11}{6}b - 3\frac{3}{4}\right) + \frac{7}{4}\left(-\frac{3}{8}b - 1\frac{3}{8}\right) = \frac{5}{64}$$

$$\left\{ -\frac{3}{2} \right\}$$

$$18) 4.68 = -7.3(x - 7.6) - 6(-4.9 - 7.9x)$$

$$\{-2\}$$

$$19) -\frac{15}{8}\left(n + 1\frac{4}{5}\right) = -2\frac{1}{2}n - 4\frac{5}{56}$$

$$\left\{ -\frac{8}{7} \right\}$$

$$20) 32.49 + 2.5a = 5.3(a + 3.5) - 3.7$$

$$\{6.3\}$$

$$21) \frac{1}{2}\left(\frac{4}{7}v - 1\frac{1}{2}\right) = \frac{9}{7}\left(2\frac{1}{3}v - 2\frac{5}{8}\right)$$

$$\left\{ \frac{147}{152} \right\}$$

$$22) -(1 - 4.8m) = -0.2 + 6.4(m - 4.3)$$

$$\{16.7\}$$

DID YOU HEAR ABOUT . . .

A	the	B	comedian	C	who	D	incorporated	E	himself
F	and	G	became	H	a	I	laughing	J	stock ?

Solve each problem below. Find your solution in the answer column and notice the word next to it. Write the word in the box above that contains the letter of that exercise. Keep working and you will hear about some "punny" business!

Answers:

- (A) The length of a rectangular field is 24 meters. This is 3 meters less than twice the width. Find the width.

$$24 = 2w - 3$$

13.5 m

- (B) The price of a television set on sale is \$360. This is two thirds of the regular price. Find the regular price.

$$360 = \frac{2}{3}p$$

\$540

- (C) Three fifths of the members of a hiking club went on the last hiking trip. If 39 people went on the trip, how many are in the club?

$$\frac{3}{5}p = 39$$

65 people

- (D) Matthew travels two and one-half miles to get to school. This is 3 times the distance that Jennifer travels. How far does Jennifer travel?

$$2\frac{1}{2} = 3j$$

$\frac{5}{6}$ mi

- (E) The diameter of a small pizza is 16 centimeters. This is 2 centimeters more than two fifths of the diameter of a large pizza. Find the diameter of the large pizza.

$$16 = \frac{2}{5}d + 2$$

35 cm

- (F) The width of a photograph is 4 centimeters more than three tenths of the length. If the width is 13 cm, find the length.

$$\frac{3}{10}l + 4 = 13$$

30 cm

- (G) The heaviest human of all time weighed 486 kilograms. This is 12 kilograms less than 6 times Juan's weight. How much does Juan weigh?

$$486 = 6j - 12$$

83 kg

- (H) The rainfall this year was 18.6 centimeters. This is 3.2 centimeters less than half of the rainfall last year. What was the rainfall last year?

$$18.6 = \frac{1}{2}r - 3.2$$

43.6 cm

- (I) The price of a brick today is 49¢. This is 3¢ less than 4 times the price 20 years ago. What was the price 20 years ago?

$$49 = 4p - 3$$

13 ¢

- (J) Rolex Smudgepot owns 17 ounces of gold. This is one ounce more than three fourths of the amount he owned last year. How much did he own last year?

$$17 = \frac{3}{4}n + 1$$

$21\frac{1}{3}$ oz

552	BOND	
30	AND	F
$21\frac{1}{3}$	STOCK	J
65	WHO	C
69	MARKET	
35	HIMSELF	E
$1\frac{1}{2}$	BROKER	
37	COMPANY	
32	BUSINESS	
13.5	THE	A
81	DOW	
13	LAUGHING	I
83	BECAME	G
43.6	A	H
44.7	JONES	
540	COMEDIAN	B
23	FUNNY	
$\frac{5}{6}$	INCORPORATED	D
15	JOKE	

Why Did They Arrest the Automobile Factory Worker?

Solve each problem below and find your solution at the bottom of the page. Write the letter of that problem in the box above the solution.

(E) Find two consecutive integers whose sum is 45.

$$x + (x+1) = 45 \quad x = 22, x+1 = 23$$

(A) Find two consecutive integers whose sum is -29.

$$x + (x+1) = -29 \quad x = -15, x+1 = -14$$

(B) Find three consecutive integers whose sum is 48.

$$x + (x+1) + (x+2) = 48 \quad x = 15, x+1 = 16, \\ x+2 = 17$$

(O) Find three consecutive integers whose sum is -147.

$$x + (x+1) + (x+2) = -147 \quad x = -50, x+1 = -49, \\ x+2 = -48$$

(E) Find two consecutive even integers whose sum is 66.

$$x + (x+2) = 66 \quad x = 32, x+2 = 34$$

(A) Find three consecutive even integers whose sum is 72.

$$x + (x+2) + (x+4) = 72 \quad x = 22, x+2 = 24, \\ x+4 = 26$$

(K) Find two consecutive odd integers whose sum is -88.

$$x + (x+2) = -88 \quad x = -45, x+2 = -43$$

(H) Find four consecutive odd integers whose sum is 56.

$$x + (x+2) + (x+4) + (x+6) = 56 \quad x = 11, 13, 15, 17$$

(O) Find two consecutive even integers such that the sum of the larger and twice the smaller is 62.

$$2x + (x+2) = 62 \quad x = 20, 22$$

(T) Find three consecutive even integers such that the sum of the smallest and the largest is 36.

$$x + (x+4) = 36 \quad x = 16, 18, 20$$

(K) Find three consecutive odd integers such that the sum of the smallest and 4 times the largest is 61.

$$x + 4(x+4) = 61 \quad x = 9, 11, 13$$

(R) Find three consecutive integers such that the sum of twice the smallest and 3 times the largest is 126.

$$2x + 3(x+2) = 126 \quad x = 24, 25, 26$$

	H	E		T	O	O	K		A	B	R	A	K	E	
14, 15, 16	22, 23	11, 13, 15, 17	-51, -52, -53	-50, -49, -48	20, 22	-45, -43	13, 15, 17, 19	22, 24, 26	24, 26, 28	15, 16, 17	24, 25, 26	-15, -14	9, 11, 13	32, 34	11, 13, 15