

Student Name _____

Parent Signature _____

Alg.
Ch. 2
Review

$$\begin{array}{r} 1) -21 = b - 37 \\ +37 \quad +37 \\ \hline 16 = b \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 2) k + 0.9 = 1.5 \\ -0.9 \quad -0.9 \\ \hline k = .6 \end{array} \quad \text{(D)}$$

$$\begin{array}{r} 3) \frac{y}{4} = -8 \\ \times 4 \\ \hline y = -32 \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 4) \frac{3}{8}x = 18 \\ \times \frac{8}{3} \\ \hline x = 48 \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 5) 8d = -24 \\ \div 8 \\ \hline d = -3 \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 6) 11 = -d + 6 \\ -6 \quad -6 \\ \hline 5 = -d \\ -1 \quad -1 \\ \hline -5 = d \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 7) 2 = \frac{10+z}{-3} \\ \times (-3) \\ \hline -6 = 10+z \\ -10 \quad -10 \\ \hline -16 = z \end{array} \quad \text{(B)}$$

$$\begin{array}{r} 8) 5(y+7) = 50 \\ 5y + 35 = 50 \\ -35 \quad -35 \\ \hline 5y = 15 \\ \div 5 \\ \hline y = 3 \end{array} \quad \text{(D)}$$

$$\begin{array}{r} 9) 5x - 9 = 3x - 3 \\ -3x \quad -3x \\ \hline 2x - 9 = -3 \\ +9 \quad +9 \\ \hline 2x = 6 \\ \div 2 \\ \hline x = 3 \end{array} \quad \text{(D)}$$

$$\begin{array}{r} 10) 5d - 4d - 3d - 9 = 4d \\ -2d - 9 = 4d \\ +2d \quad +2d \\ \hline -9 = 6d \\ \div 6 \\ \hline -\frac{3}{2} = d \end{array} \quad \text{(C)}$$

$$\begin{array}{r} 11) \frac{4}{5}x - 3 = 2 \\ +3 \quad +3 \\ \hline \frac{4}{5}x = 5 \\ \times \frac{5}{4} \\ \hline x = \frac{25}{4} = 6\frac{1}{4} \end{array} \quad \text{(D)}$$

$$\begin{array}{r} 12) 40w - 80 = 480 \\ +80 \quad +80 \\ \hline 40w = 560 \\ \div 40 \\ \hline w = 14 \text{ weeks} \end{array} \quad \text{(A)}$$

$$\begin{array}{r} 13) 5d + 10.50 - 4.00 = 15.00 \\ 5d + 6.50 = 15.00 \\ -6.50 \quad -6.50 \\ \hline 5d = 8.50 \\ \div 5 \\ \hline d = 1.70 \end{array} \quad \text{(B)}$$

$$\begin{array}{r} 14) 5a + 8 = 4a + 28 \\ -4a \quad -4a \\ \hline a + 8 = 28 \\ -8 \quad -8 \\ \hline a = 20 \end{array} \quad \text{(B)}$$

$5a + 8$
 $5(20) + 8$
 $100 + 8 = 108$

$$\begin{array}{r} 15) a) 6m - 4 = 7m + 7 - m \\ 6m - 4 = 6m + 7 \\ -6m \quad -6m \\ \hline -4 = 7 \\ \text{no} \end{array}$$

$$\begin{array}{r} b) 7w + 8 - w = 8w - 2(w - 4) \\ 6w + 8 = 8w - 2w + 8 \\ 6w + 8 = 6w + 8 \\ -6w \quad -6w \\ \hline 8 = 8 \\ \text{yes} \end{array}$$

$$\begin{array}{r} c) 3y + 3 = 3y - 4 \\ -3y \quad -3y \\ \hline 3 = -4 \\ \text{no} \end{array}$$

$$\begin{array}{r} d) 8 - (6v + 5) = -6v - 3 \\ 8 - 6v - 5 = -6v - 3 \\ -6v + 3 = -6v - 3 \\ +6v \quad +6v \\ \hline 3 = -3 \\ \text{no} \end{array}$$

(B)

16) $\boxed{\quad} w$
 $2w - 3$

$$P = 2l + 2w$$

$$30 = 2(2w - 3) + 2(w)$$

$$30 = 4w - 6 + 2w$$

$$30 = 6w - 6$$

$$\begin{array}{r} +6 \\ +6 \\ \hline 36 = 6w \\ \hline 6 = w \end{array}$$

$$9 = 2w - 3 \quad \text{(B)}$$

$$\begin{array}{r} 2(6) - 3 \\ 12 - 3 \end{array}$$

17) Carlos	53	$4 - t$	$53(4 - t)$
Maria	55	t	$55t$

$$53(4 - t) + 55t = 217$$

$$212 - 53t + 55t = 217$$

$$212 + 2t = 217$$

$$\begin{array}{r} -212 \\ -212 \\ \hline 2t = 5 \\ \hline t = 2.5h \end{array} \quad \text{(D)}$$

18) North	$r + 4$	1.25	$1.25(r + 4)$
South	r	1.25	$1.25r$

$$1.25(r + 4) + 1.25r = 27.5$$

$$1.25r + 5 + 1.25r = 27.5$$

$$2.5r + 5 = 27.5$$

$$\begin{array}{r} -5 \\ -5 \\ \hline 2.5r = 22.5 \\ \hline \frac{2.5r}{2.5} = \frac{22.5}{2.5} \\ r = 9 \text{ km/h (South)} \\ r + 4 = 13 \text{ km/h (North)} \end{array}$$

$$\begin{array}{r} 9 \\ 2.5 \overline{) 22.5} \\ \underline{22.5} \\ 0 \end{array}$$

(D)

19) $F = \frac{9}{5}C + 32$ for C

$$\begin{array}{r} -32 \\ -32 \\ \hline F - 32 = \frac{9}{5}C \end{array}$$

$$\left(\frac{5}{9}\right)(F - 32) = \left(\frac{9}{5}C\right)\left(\frac{5}{9}\right)$$

$$\frac{5}{9}(F - 32) = C \quad \text{now } F = -22$$

$$\frac{5}{9}(-22 - 32) = C$$

$$\frac{5}{9}(-54) = C$$

$$\frac{5}{9}\left(\frac{-54}{1}\right) = C$$

$$-30 = C \quad \text{(D)}$$

20) 86, 79, 74, 86, 92, 81

mean

$$\begin{array}{r} 86 \\ 79 \\ 74 \\ 86 \\ 92 \\ + 81 \\ \hline 498 \div 6 \\ \hline 83 \end{array}$$

$$\begin{array}{r} 83 \\ 6 \overline{) 498} \\ \underline{48} \\ 18 \\ \underline{18} \\ 0 \end{array}$$

median
74, 79, 81, 86, 86, 92

$$\frac{81 + 86}{2} = \frac{167}{2} = 83.5$$

mode 86

(A)

21) $\frac{91 + 108 + 102 + 124 + x}{5} = 110$

$$\text{(S)} \frac{425 + x}{5} = 110 \quad \text{(S)}$$

$$425 + x = 550$$

$$\begin{array}{r} -425 \\ -425 \\ \hline x = 125 \end{array}$$

(B)

$$\begin{array}{r}
 22) \quad 34 \\
 \quad 11 \\
 \quad 30 \\
 \quad 27 \quad \text{mean} \\
 \quad 12 \\
 \quad 12 \\
 \quad 12 \\
 \quad 12 \\
 + 22 \\
 \hline
 160 \div 8 \\
 20
 \end{array}$$

$$\begin{array}{r}
 \text{range} \\
 34 \\
 - 11 \\
 \hline
 23
 \end{array}$$

(C)

$$23) 1.1, 1.3, 1.7, 2.2, 2.2, 2.5, 3.1, 3.3$$

Stem	leaf
1	1 3 7
2	2 2 5
3	1 3

$$11 = 1.1$$

(D)

$$\begin{array}{l}
 24) \quad p = 2l + 2w \\
 32 = 2(3x) + 2(7) \\
 32 = 6x + 14 \\
 \underline{-14} \quad \underline{-14} \\
 18 = 6x \\
 \underline{6} \quad \underline{6} \\
 3 = x \quad (D)
 \end{array}$$

$$\begin{array}{r}
 25) \quad 4.1t - 5.5m = 13 ; t \\
 \quad \quad \quad + 5.5m \quad + 5.5m \\
 \hline
 4.1t \quad \quad = 13 + 5.5m \\
 \underline{4.1} \quad \quad \quad \underline{4.1} \\
 t = \frac{13 + 5.5m}{4.1}
 \end{array}$$

(B)