

Chapters 1 and 2 Frequently Asked Questions:

Chapter 1 Test Form B

#16. Evaluate  $\frac{(6-2)^2+4}{2(6-4)} = \frac{4^2+4}{2 \cdot 2} = \frac{16+4}{4} = \frac{20}{4} = 5$

#17. Evaluate  $18 + 3[22 - 4(8 - 5)]$

$$18 + 3[22 - 4(8 - 5)]$$

$$= 18 + 3[22 - 4 \cdot 3]$$

$$= 18 + 3[22 - 12]$$

$$= 18 + 3 \cdot 10$$

$$= 18 + 30$$

$$= 48$$

#19. A student scored a 92, 85, 100 and 87 on four exams.

Find the student's average (mean) score.

The average (mean) =  $\frac{92+85+100+87}{4} = \frac{364}{4} = 91$

The student's average (mean) score is 91.

Chapter 2 Test Form B

#10.  $-3 + 4 - 12 = 1 - 12 = -11$

#11.  $-9 - (-12) = -9 + 12 = 3$

#18. Evaluate the expression:

$$(-6)^2 - 2(-4)(-1)$$

$$= 36 - 2 \cdot 4$$

$$= 36 - 8$$

$$= 28$$

#22. Solve the equation:  $\frac{a}{5} - 9 = 2(-4)$

$$\frac{a}{5} - 9 = 2(-4)$$

$$\frac{a}{5} - 9 = -8$$

$$\frac{a}{5} - 9 \underline{+9} = -8 \underline{+9}$$

$$\frac{a}{5} = 1$$

$$\frac{a}{5} \cdot 5 = 1 \cdot 5$$

$$a = 5$$

#23. Solve the equation:  $-6 + (-12) = -3h$

$$-6 + (-12) = -3h$$

$$-18 = -3h$$

$$\frac{-18}{-3} = \frac{-3h}{-3}$$

$$6 = h$$

#24. Solve the equation:  $|-5 \cdot 6 + 8 \cdot 2|$

$$|-5 \cdot 6 + 8 \cdot 2|$$

$$= |-30 + 16|$$

$$= |-14|$$

$$= 14$$

### Chapter 1 Test Form C

#13. Evaluate the expression:  $\frac{3^2-3}{(3-2)^2}$

$$\frac{3^2-3}{(3-2)^2} = \frac{9-3}{1^2} = \frac{6}{1} = 6$$

#14. Evaluate the expression:  $10 \cdot 7 - 6 \div 2$

$$10 \cdot 7 - 6 \div 2$$

$$= 70 - 3$$

$$= 67$$

### Chapter 2 Test Form C

#6.  $1 - (-2)^3 = 1 - (-2)(-2)(-2) = 1 - (-8) = 1 + 8 = 9$

#9.  $(-7 + 2) + [8 + (-14)]$

$$= -5 + [-6]$$

$$= -11$$

#15.  $-x = 5$

$$-(-1)x = (-1)5$$

$$x = -5$$

OR  $-x = 5$

$$\frac{-x}{-1} = \frac{5}{-1}$$

$$x = -5$$

#17.  $-3 - (-5) - 7$

$$= -3 + 5 - 7$$

$$= 2 - 7$$

$$= -5$$

#18.  $-1(-2)^2(-3)^2$

$$= -1 \cdot (-2)(-2) \cdot (-3)(-3)$$

$$= -1 \cdot 4 \cdot 9 = -36$$

#16.  $-6 = -4^2 + \frac{y}{-2}$  Note:  $-4^2 = -4 \cdot 4 = -16$

$$-6 = -16 + \frac{y}{-2}$$

$$+16 \quad +16$$

$$-6 + 16 = -16 + 16 + \frac{y}{-2}$$

$$10 = 0 + \frac{y}{-2}$$

$$10 \cdot (-2) = \frac{y}{-2} \cdot (-2)$$

$$-20 = y$$

#20.  $-5^2 - (-5)^2$

$$= -5 \cdot 5 - (-5)(-5)$$

$$= -25 - 25 = -50$$

#22.  $x + 6 = -8 - (-3)$

$$x + 6 = -8 + 3$$

$$x + 6 = -5$$

$$x + 6 - 6 = -5 - 6$$

$$x = -11$$

$$\#23. |8 \div (-4) \cdot 2|$$

$$= |(-2) \cdot 2| \quad \text{Left} \Rightarrow \text{Right}$$

$$= |-4|$$

$$= 4$$

$$\#24. -4^3 = -4 \cdot 4 \cdot 4 = -16 \cdot 4 = -64$$

#25. Solve the equation:

$$6 - 10 = -2x - 4(-2)$$

$$-4 = -2x - (-8)$$

$$-4 = -2x + 8$$

$$-4 - 8 = -2x + 8 - 8$$

$$-12 = -2x$$

$$\frac{-12}{-2} = \frac{-2x}{-2}$$

$$6 = x$$

In the text book.

2.4 #16. Find each product and then graph in on a number line. What is the distance between every two product?

$$2(2) = 4, 1(-2) = -2, 0(-2) = 0, -1(-2) = 2, -2(-2) = 4$$

The distance between two number is the absolute value of |one number – the other number|

For example, the distance between product  $2(2) = 4$ , and  $1(-2) = -2$  is

$$|4 - (-2)| = |4 + 2| = 6$$

The distance between product  $2(2) = 4$ , and  $0(-2) = 0$  is

$$|4 - 0| = |4| = 4$$

The distance between product  $2(2) = 4$ , and  $-1(-2) = 2$  is

$$|4 - 2| = |2| = 2$$

The distance between product  $2(2) = 4$ , and  $-2(-2) = 4$  is

$$|4 - 4| = |0| = 0$$

You may like to work on the rest of problems.

2.5 #9. Show that there is no answer for  $\frac{-6}{0}$  by writing the related multiplication statement.  $0(\quad) = -6$

If there is an answer to  $\frac{-6}{0}$ , let it be  $\frac{-6}{0} = x$ . Then  $0 \cdot x = -6$ .

In the equation,  $0 \cdot x = -6$ , the right hand side is always zero, which could never equal to  $-6$ . Therefore

there is no solution to  $0 \cdot x = -6$ . That is, here is no answer for  $\frac{-6}{0}$  by writing the related multiplication statement.  $0(\quad) = -6$

2.6

#59.

$$\begin{aligned} & 2 + 3[5 - (1 - 10)] \\ &= 2 + 3[5 - (-9)] \\ &= 2 + 3[5 + 9] \\ &= 2 + 3[14] \\ &= 2 + 42 \\ &= 44 \end{aligned}$$