

## TB(1A) Ch. 1 Directed Numbers & the Number Line

### Multiple Choice Questions

1. [11-12 Standardized Test 1, 3]

Arrange the numbers 4.6, 0,  $-4\frac{2}{3}$ ,  $-4.5$

and 5% in ascending order.

A.  $-4\frac{2}{3}$ ,  $-4.5$ , 0, 5%, 4.6

B.  $-4.5$ ,  $-4\frac{2}{3}$ , 0, 5%, 4.6

C. 4.6, 5%, 0,  $-4.5$ ,  $-4\frac{2}{3}$

D. 4.6, 5%, 0,  $-4\frac{2}{3}$ ,  $-4.5$

2. [11-12 Standardized Test 1, 4]

Which of the following should be added to

$-\left(\frac{2}{-7}\right) + \left(-\frac{4}{9}\right)$  so that the sum is zero?

A.  $-\left(\frac{2}{-7}\right) - \left(-\frac{4}{9}\right)$

B.  $-\left(-\frac{2}{7}\right) + \left(-\frac{4}{9}\right)$

C.  $-\left(+\frac{2}{7}\right) - \left(-\frac{4}{9}\right)$

D.  $+\left(\frac{-2}{7}\right) + \left(\frac{4}{-9}\right)$

3. [11-12 Standardized Test 1, 10]

Peter's weight was 80 kg in January. Then his weight had the following changes: +4 kg from January to February,  $-2$  kg from February to March and  $-1.5$  kg from March to April where a positive number represented an increase in his weight. What was the change from April to May if his weight was 82.5 kg in May?

A.  $-5$  kg

B.  $-2$  kg

C.  $+2$  kg

D.  $+5$  kg

4. [11-12 Mid-year, 2]

Find the result of "3 times the sum of  $-2$  and  $-6$ , then subtract it from  $-8$ ".

A.  $-32$

B.  $-16$

C. 4

D. 16

5. [11-12 Mid-year, 16]

$$\left[-8 \div \left(\frac{3}{10} - \frac{2}{5}\right)\right] - (-12) \times \frac{2}{3} \div \left(-\frac{4}{5}\right) =$$

A.  $-90$

B.  $-70$

C. 70

D. 90

6. [11-12 Final Exam, 1]

Arrange  $-0.6$ ,  $-\frac{3}{4}$ ,  $\frac{2}{3}$  and  $-\frac{5}{7}$  in descending order.

A.  $\frac{2}{3}$ ,  $-\frac{3}{4}$ ,  $-\frac{5}{7}$ ,  $-0.6$

B.  $\frac{2}{3}$ ,  $-0.6$ ,  $-\frac{5}{7}$ ,  $-\frac{3}{4}$

C.  $-0.6$ ,  $-\frac{5}{7}$ ,  $-\frac{3}{4}$ ,  $\frac{2}{3}$

D.  $-\frac{3}{4}$ ,  $-\frac{5}{7}$ ,  $-0.6$ ,  $\frac{2}{3}$

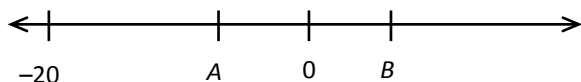
7. [11-12 Final Exam, 2]

$$-2^2 - (-3)^2 \times (2-4)^2 =$$

- A. -52                      B. -40  
 C. 32                        D. 20

8. [12-13 Standardized Test 1]

Refer to the number line below, which of the following are possible values of  $A$  and  $B$  if  $B - A = 12$ ?



- A.  $A = -15, B = -3$   
 B.  $A = -4.2, B = 7.8$   
 C.  $A = 2, B = 10$   
 D.  $A = 7, B = -5$

9. [12-13 Standardized Test 1]

If  $a$  is a negative number, determine the sign of the value of  $a \cdot a - a \cdot a \cdot a - a$ .

- A. Positive  
 B. Negative  
 C. Neither positive nor negative  
 D. Cannot be determined

10. [12-13 Standardized Test 1]

If  $\frac{3 \times (-3) + (2+7)(-10)}{b+4.67}$  is positive, which of the following is a possible value of  $b$ ?

- A. 0  
 B. -4.66  
 C. -4.67  
 D. -4.68

11. [12-13 Mid-year 1]

Arrange  $\frac{1}{4}$ ,  $-\frac{1}{3}$ ,  $-1$  and  $0.5$  in ascending order.

- A.  $-1, -\frac{1}{3}, \frac{1}{4}, 0.5$   
 B.  $-\frac{1}{3}, -1, \frac{1}{4}, 0.5$   
 C.  $0.5, \frac{1}{4}, -1, -\frac{1}{3}$   
 D.  $0.5, \frac{1}{4}, -\frac{1}{3}, -1$

12. [12-13 Final Exam, 1]

Which of the following expressions has the largest value?

- A.  $3(-2^2)$   
 B.  $-2(3)^3$   
 C.  $-2(-3)^2$   
 D.  $-3(-2^2)$

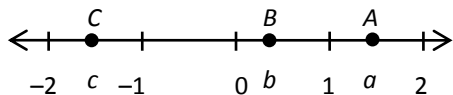
13. [13-14 Standardized Test 1]

Arrange  $-\frac{4}{5}$ ,  $-\frac{5}{4}$ ,  $\frac{5}{4}$  and  $\frac{4}{5}\%$  in descending order.

- A.  $-\frac{5}{4}, -\frac{4}{5}, \frac{4}{5}\%, \frac{5}{4}$   
 B.  $-\frac{4}{5}, -\frac{5}{4}, \frac{4}{5}\%, \frac{5}{4}$   
 C.  $\frac{5}{4}, \frac{4}{5}\%, -\frac{5}{4}, -\frac{4}{5}$   
 D.  $\frac{5}{4}, \frac{4}{5}\%, -\frac{4}{5}, -\frac{5}{4}$

14. [13-14 Standardized Test 1]

A, B and C are three points on a number line representing the numbers  $a$ ,  $b$  and  $c$  respectively. Which of the following expressions has the largest value?



- A.  $b^2$
- B.  $ab$
- C.  $a - c$
- D.  $a + b + c$

15. [13-14 Mid-year Exam]

Which of the following is equal to  $-3$ ?

- A.  $\frac{(-9)(+4) - (-3)(-6)}{+6}$
- B.  $\frac{(-9)(+4) + (-3)(-6)}{+6}$
- C.  $\frac{(+9)(-4) + (-3)(-6)}{-6}$
- D.  $\frac{(-9)(-4) - (+3)(-6)}{-6}$

16. [13-14 Mid-year Exam]

A bird is 5 m above the sea level and a submarine is 21 m below the sea level. Find the distance between the bird and the submarine.

- A.  $-26$  m
- B.  $-16$  m
- C.  $16$  m
- D.  $26$  m

17. [13-14 Final Exam]

Which of the following expressions is equal to 9?

- A.  $-3^2$
- B.  $-3^3$
- C.  $(-3)^2$
- D.  $(-3)^3$

18. [14-15 Mid-year Exam]

Which of the following gives a positive result?

- A.  $(-0.75)(1.28)(-0.1)(-5) \div 3$
- B.  $10 - \frac{1}{2}(-20) + 0.1 \times 5.27$
- C.  $\frac{(-1)(-2)(-3)(-4)(-5)}{(0.1)(-0.2)(0.3)(-0.4)(0.5)}$
- D.  $(1 - 2 + 3 - 4 + 5 - 6 + 7 - 8 + 9 - 10)^3$

19. [14-15 Mid-year Exam]

If  $a > 0$ ,  $b < 0$  and  $c < 0$ , then

- A.  $a - b - c < 0$ .
- B.  $abc < 0$ .
- C.  $\frac{ab}{c} + bc > 0$ .
- D.  $\frac{a - b}{b + c} > 0$ .

20. [14-15 Mid-year Exam]

A school is located 25 km west to a park. The park is 10 km east to a mall. Which of the following is correct?

- A. The school is 35 km west to the mall.
- B. The school is 15 km west to the mall.
- C. The school is 35 km east to the mall.
- D. The school is 15 km east to the mall.

21. [14-15 Final Exam]

Arrange  $-0.3$ ,  $-\frac{3}{4}$ ,  $\frac{3}{2}$  and  $\frac{2}{3}$  in descending order.

- A.  $-0.3, -\frac{3}{4}, \frac{3}{2}, \frac{2}{3}$
- B.  $-\frac{3}{4}, -0.3, \frac{3}{2}, \frac{2}{3}$
- C.  $\frac{2}{3}, \frac{3}{2}, -0.3, -\frac{3}{4}$
- D.  $\frac{3}{2}, \frac{2}{3}, -0.3, -\frac{3}{4}$

**22. [15-16 Mid-year Exam]**

Which of the following is the result of the word phrase “multiply  $-5$  by  $6$ , and then subtract the product from  $30$ ”?

- A.  $-60$
- B.  $0$
- C.  $30$
- D.  $60$

**23. [15-16 Mid-year Exam]**

Which of the following does not have zero value?

- A.  $(2 - 2) \div (2 \div 2)$
- B.  $(2 \times 0) \div (2 + 2)$
- C.  $(2 - 2) \times (2 \div 2)$
- D.  $(2 \div 2) \div (2 - 2)$

**24. [15-16 Mid-year Exam]**

$$-4 + [-2 + 12 \div (-19 + 21) \div (-3)] =$$

- A.  $-8$ .
- B.  $-5\frac{2}{3}$ .
- C.  $-4$ .
- D.  $0$ .

**25. [15-16 Final Exam, #2]**

Which of the following statements are wrong?

- I.  $-2 + 4 = -6$
- II.  $-2(-3) = -5$
- III.  $2 + 3 \times 4 = 20$

- A. I and II only
- B. I and III only
- C. II and III only
- D. I, II and III

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