Name_____ Date _____ Class _____

PreAP Test 3 Review: Integer Operations
Math 6 Pre-AP

1. Georgina works on the 30th floor of an office building. She took the elevator to the cafeteria on the 7th floor. How many floors did she travel?

   A 7
   B 23 (circled)
   C 30
   D 37

   $30 - 7 = 23$

2. Which of the following has the same value as $-10 + -3$?

   A $-10 - 3$ (circled)
   B $-10 - (-3)$
   C $-3 + 10$
   D $-3 - (-10)$

   $-10 + -3 = -13$
   $-10 - (3) = -13$

3. A shopper uses a department-store gift card to pay for 3 sweaters priced at $27 each. What is the change in the value of the gift card?

   A -$81 (circled)
   B -$27
   C -$24
   D $81

   $$\begin{array}{r} \overset{2}{-27} \\ \times\quad 3 \\ \hline -81 \end{array}$$

4. When her elevator was out of service, Debi walked down 21 flights of stairs. She stopped to rest after every 3 flights. How many times did Debi stop to rest?

   A -63
   B -31
   C 18
   D 7 (circled)

   $3\overline{)-21}$ (quotient -7, circled)

   Think: can you have a negative # of rests?

5. Which expression would be evaluated as a positive number?

   A $\dfrac{(-3)(-4)}{(-6)} = \dfrac{12}{-6} = -2$

   B $\dfrac{(3)(-4)}{(6)} = \dfrac{-12}{6} = -2$

   C $\dfrac{(-3)(4)}{(6)} = \dfrac{-12}{6} = -2$

   D $\dfrac{(-3)(4)}{(-6)} = \dfrac{-12}{-6} = 2$ (circled)

6. Manuel played an arcade game that cost 25 tokens per game. In six games, Manuel won 0 tokens, 10 tokens, 50 tokens, 0 tokens, 5 tokens, and 10 tokens. What is the change in the amount of tokens Manuel has?

   A -85
   B -75 (circled)
   C 75
   D 90

   ① $-25 + 0 = -25$
   ② $-25 + 10 = -15$
   ③ $-25 + 50 = +25$
   ④ $-25 + 0 = -25$
   ⑤ $-25 + 5 = -20$
   ⑥ $-25 + 10 = -15$

   $(-25) + (-15) + (25) + (-25) + (-20) + (-15)$

   $$\begin{array}{r} -15 \\ -25 \\ -20 \\ +-15 \\ \hline -75 \end{array}$$

7. The low temperature for 5 days was -5°, -7°, -2°, 2°, and -3°. What was the average low temperature for those days?

   A -4°
   B -3° (circled)
   C -2°
   D -1°

   $-5 + (-7) + (-2) + 2 + (-3)$

   $-17 + 2$

   -15

   $5\overline{)-15}$ (quotient -3)

8. A football team was given 3 penalties for 15 yards each and 2 penalties for 5 yards each. What was the total change in their field position from these penalties?

A   –85 yd
B   –75 yd
C   –55 yd
D   –20 yd

$$[3 \cdot (-15)] + [2 \cdot (-5)]$$
$$-45 + -10$$
$$-55$$

9. Amy bought 3 pounds of lemons at $2 per pound, a box of rice for $4, and 7 frozen dinners for $3 each. What is the change in the amount of money she has?

A   –$39
B   –$31
C   –$9
D $31

$$(3 \cdot 2) + (-4) + (7 \cdot 3)$$
$$-6 + (-4) + (-21)$$
$$-10 + (-21)$$
$$-31$$

10. Mike deposited $200 into his bank account. He then wrote checks for $20 and $30. Then he deposited $40 dollars more. Which of the following represents the changes in the value of Mike's account?

A $200 - 20 - 30 + 40$
B $200 - 20 + 30 + 40$
C $200 + 20 - 30 - 40$
D $200 + 20 - 30 + 40$

$$200 + (-20) + (-30) + 40$$
$$200 - 20 - 30 + 40$$

11. Tyler wrote checks on his checking account for $20, $20, $18, $20, and $35. He also deposited $53 in the account. Which number describes the change in the balance of his account?

A   –$113
B   –$60
C $60
D $83

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 1
35
20
20
20
18
143
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$$-20 + (-20) + (-18) + (-20) + (-35) + 53$$
$$-113 + 53$$
$$-60$$

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 113
- 53
  60
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12. During a 3-month period, Nellie gained 5 pounds 10 ounces. What should Nellie do to figure out how much she gained each month? Remember that there are 16 ounces in 1 pound.

$$5\tfrac{10}{16} \div 3 \quad \text{Process}$$

$$5\tfrac{5}{8} \div 3 \quad \text{Answer}$$

$$\tfrac{45}{8} \div 3 = \tfrac{45}{8} \cdot \tfrac{1}{3} = \tfrac{15}{8} = 1\tfrac{7}{8} \text{ lbs.}$$

13. Billy the fish descended to a depth of 5 meters. He then descended 2 meters every minute for the next 10 minutes. Write an integer to describe Billy's depth at the end of the 10 minutes.

$$-5 + (2 \cdot 10)$$
$$-5 + (-20)$$
$$-25 \text{ meters}$$

14. When 2 positive numbers are added, which is always true?

A The answer is always negative
B The answer is always positive
C The answer could be positive or negative
D The sign depends on which of the two numbers is greater.

15. When 2 negative numbers are added, which is always true?

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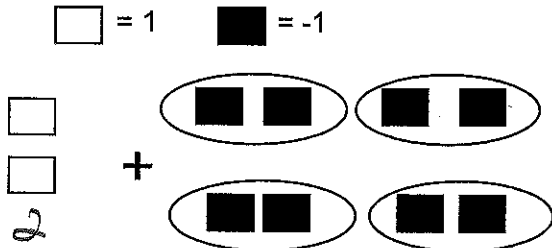D The sign depends on which of the two numbers is greater.

16. Write 3 equations that have -5 as the answer.

$-2 + (-3) = -5$

$-15 \div 3 = -5$

$8 - 13 = -5$

17. Which expression matches the model below?

□ = 1   ■ = -1

A.) 2 + -4   B.) 2 + 2(-4)

C.) -2 + 2(4)   D.) 2 + 4(-2)

18. Harry bought 5 pieces of gum for $1.50 from a $5 bill. He gave 2 pieces of the gum to Jimmy. Jimmy got his allowance of $10. Write an integer to represent to amount of Jimmy's allowance.

Distractors

Important Info!

+10

19. Which is true about the following problems?
    Problem #1: -25 – 10 $= -25 + (-10) = -35$
    Problem #2: 25 – 30 $= 25 + (-30)$ -5

A Both answers are negative
B Both answers are positive
C only #1 is positive
D only #2 is positive

20. Three of the following statements are true. Which one is NOT true?
    A -9 – 5 is equal to -9 – (-5)
    B -9 – 5 is equal to -9 – (+5)
    C -9 – 5 is equal to -5 - 9
    D -9 – 5 is equal to -9 + (-5)

$-9 - 5 = -9 + (-5) = -14$

$-5 - 9 = -5 + (-9) = -14$

$-9 - (-5) = -9 + 5 = -4$ ← Not the same.

21. Evaluate. (5 + -9) ÷ 2

$(5 + (-9)) \div 2$

$\frac{9}{5}4$

$-4 \div 2$

-2

22. A quarterback got sacked behind the line of scrimmage and lost 12 yards. On the next play, he passed the ball for a gain of 20 yards. What integer represents the total change in yardage?

$-12 + 20 = 8$

$\frac{20}{-12}8$

+8

23. The Salton Trough has an elevation of 69 meters below sea level. The Dead Sea Depression is almost 6 times deeper. Write and find the value of an expression to find the approximate elevation of the Dead Sea Depression.

$$-69 \cdot 6 = -414$$

$$\begin{array}{r} \overset{5}{6}9 \\ \times\, 6 \\ \hline 414 \end{array}$$

(−414 meters)

24. Race car driver Mario won 3 races and earned 75 points for each win. During the fourth race, he had deductions of 55 points, 104 points, and 85 points, but earned 3 points for finishing. Write and find the value of an expression to find how many points he has now.

$$(3 \cdot 75) - 55 - 104 - 85 + 3$$
$$(3 \cdot 75) + (-55) + (-104) + (-85) + 3$$
$$225 + (-244) + 3$$
$$228 + (-244)$$ (−16)

$$\begin{array}{r} 75 \\ \times\, 3 \\ \hline 225 \end{array}$$

$$\begin{array}{r} 104 \\ 55 \\ 85 \\ \hline 244 \end{array}$$

$$\begin{array}{r} 3 \\ 244 \\ +\, 228 \\ \hline 16 \end{array}$$

25. For 8 days of very hot weather, the water level in a lake dropped 3 inches per day. On the ninth day, storms raised the level 6 inches. Write and find the value of an expression to find the change in the water level of the lake during these 9 days.

$$(8 \cdot (-3)) + 6$$
$$-24 + 6$$
(−18)

$$\begin{array}{r} 24 \\ -\, 6 \\ \hline 18 \end{array}$$

26. Jenya deposited $400 into her bank account. A couple of days later she withdrew $50. The next day she deposited $20 more. A day later she withdrew $150.

Write an expression that represents the change in Jenya's account balance.
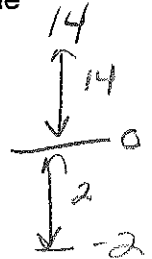
$$400 - 50 + 20 - 150$$
$$400 + (-50) + 20 + (-150)$$
$$420 + (-200)$$
(220)

$$\begin{array}{r} 420 \\ -\, 200 \\ \hline 220 \end{array}$$

27. Tyrell went to the park to go jogging. The beginning of the running path has an elevation of –2 feet. The highest elevation on the jogging path is 14 feet. What is the difference in elevation between the highest point and the beginning of the path?
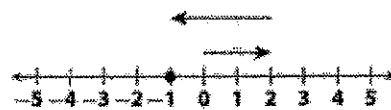
16 feet.

28.

Temperature in Four Cities

City	Temperature on Day 1 (°C)	Temperature on Day 2 (°C)
A	–5°	–1° 4°
B	–12°	–8° 4°
C	–11°	–2° 9°
D	–3°	5° 8°

A meteorologist recorded the temperature in four cities on two days last year, as shown in the table above. Which city had the greatest increase in temperature between the two days?

C.

29. What addition sentence is modeled on the number line below?

$$2 + (-3)$$

30. Daria placed the numbers $-\frac{4}{7}$, 0.5, −0.6 and $-\frac{5}{8}$ on the number line. Which of the numbers is furthest from zero?

$-\frac{4}{7} = .571$

$7\overline{)4.00}$
-35
50
-49
1

$-\frac{5}{8} = -.625$

$-5/8 = -0.625$

$.625$
$8\overline{)5.000}$
-48
20
-16
40
-40
0

31. Write a situation would most likely be represented by a rational number that is **not** an integer?

Price of a can of corn.
(Anything with a part.)

32. A bag of potatoes weighs $7\frac{1}{2}$ pounds.

Of the potatoes in the bag, $\frac{1}{6}$ are rotten. What is the weight of the good potatoes?

$\frac{1}{6} \cdot 7\frac{1}{2}$

$\frac{1}{6} \cdot \frac{5}{2} = \frac{5}{4} = 1\frac{1}{4}$ rotten

$7\frac{2}{4}$
$-1\frac{1}{4}$
$6\frac{1}{4}$

$6\frac{1}{4} = good$

33. On the track team, $\frac{3}{5}$ of the members are boys. Of these boys, $\frac{4}{7}$ are sixth-graders. What fraction of the track team are sixth-grade boys?

$\frac{3}{5} \cdot \frac{4}{7} = \boxed{\frac{12}{35}}$

34. Mr. Franklin paid $33.20 for 8 gallons of gas. What is the price of 1 gallon of gas?

$\frac{33.20 \text{ gal}}{8 \text{ gal}}$

$\boxed{\$4.15}$

4.15
$8\overline{)33.20}$
32
-8
40
-40
0

35. Alexis rode her bike 4.5 miles. Johnny rode his bike 0.8 times as far. How many miles did Johnny ride his bike?

$4.5 \cdot 0.8$

4.5
$\times .8$
36.0

$\boxed{3.6 \text{ miles}}$