CLASSWORK

STUDENT

GROUP 2

INSTRUCTOR I AM MY OWN TEACHER!

DATE LAST WEEK

Math Lab Lesson #3 Activity: Grading an Exam

Name: THAO

Directions:

1) You have **26 minutes** to complete this test. There are 13 questions.
2) **No calculators** are allowed.
3) Mark your answers carefully on the answer sheet provided separately.
4) If you finish early, **check your work**.

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1. Which expression is **not equivalent** to $5 - 7$?

A) $-7 + 5$

B) $5 + (-7)$ $5+(-7)=5-7$ SUBTRACTING IS THE SAME AS ADDING A NEGATIVE

C) $7 + (-5)$

D) $-1(7 - 5)$

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2. Which expression shows the product 11×12 using our base-10 system?

A) $1\times10^2 + 3\times10^1 + 2\times10^0$

$11\times12=132$

B) $3\times10^2 + 2\times10^1 + 1\times10^0$

$=100+30+2$

C) $1\times10^3 + 3\times10^2 + 2\times10^1$

D) $11\times10^0 + 12\times10^0$

3. Which sentence best describes the relationship between natural numbers and integers?

A) Some natural numbers are not integers

B) All natural numbers are integers

C) All integers are natural numbers LIKE 3, 4, 7, 15, . . .

D) Natural numbers and integers are the same thing!

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4. Which equality shows that the natural numbers are **not closed** under subtraction?

A) $5 - 7 = -2$

B) $7 - (-5) = 12$

C) $7 \times (-5) = -35$

D) $7 - 5 = 2$ ← I SUBTRACTED TWO NATURAL NUMBERS AND GOT ANOTHER NATURAL NUMBER!

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5. You have \$23 in your wallet. You get paid \$9 per hour, and you worked for 3 hours last week and 5 hours this week. Then your friend Yacine borrows \$20. Which expression best represents how much money you have left in your wallet?

A) $23 + 9(3 - 5) - 20$

B) $23 + 9(3 + 5) - 20$

C) $23 - 9(3 + 5) + 20$

D) $23 + 9(3 + 5 - 20)$

6. All even numbers can be written in the form $2A$, where A is an integer. All odd numbers can be written in the form $2B + 1$, where B is an integer.

Which expression represents an even number? (Assume that x is an integer)

A) $2x + 2$

B) $2x + 3$

C) $2x + 1$

D) $2(2x) + 1$

2x IS EVEN

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7. Juan has just learned the distributive property, and he is very excited to try it out! His work is shown below:

$$-6(7-5)$$

Step 1 $$= -6(7) - 6(5)$$

Step 2 $$= -42 - 30$$

Step 3 $$= -72$$

WHEN YOU SUBTRACT FROM A NEGATIVE, YOU GET MORE NEGATIVE!

Where did Juan make a mistake?

A) Step 1

B) Step 2

C) Step 3

D) Juan didn't make any mistake, looks good to me!

$9a - 9b \stackrel{?}{=} 9a - b$

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8. The statement $9(a - b) = 9a - b$ is

A) Always true

B) Sometimes true

C) Never true — FORGOT TO DISTRIBUTE

D) Not enough information given

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9. The statement $3 - 2x = x$ is

$3 - 2x = x$

$+2x \quad +2x$

$\frac{3}{3} = \frac{3x}{3}$

$1 = x$

A) Always true

B) Sometimes true

C) Never true

D) Not enough information given

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10. The number of inches of water in a bucket during a steady rain shower is given by the expression $\frac{1}{2}t + \frac{3}{2}$, where t is the number of hours since the shower started.

If there are 4 inches of rain in the bucket, how long has it been raining for?

$\frac{1}{2}(4) + \frac{3}{2} = \frac{4}{2} + \frac{3}{2} = \frac{7}{2}$

A) 2 hours

B) 8 hours

C) 5 hours

D) $\frac{7}{2}$ hours

11. Amineta is practicing factoring expressions. Her work is shown below. Which factorization is **not correct**?

A) $5x + 30 = 5(x + 6)$ ✓

B) $30 - 5x = -5(6 - x)$ ✓

C) $5x - 30 = 5(x - 6)$ ✓

D) $30 - 5x = -5(x - 6)$

THE X CHANGED PLACES!

X IS ON THE RIGHT

X IS ON THE LEFT

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12. Consider the equation $3(x + 2) = 21y + 6$. What must be true of the ratio $\frac{y}{x}$ in order for this equation to be an identity? (Assume that $x \neq 0$ and $y \neq 0$)

A) $\frac{y}{x} = 7$

B) $\frac{y}{x} = -\frac{1}{7}$

C) $\frac{y}{x} = \frac{1}{7}$

D) $\frac{y}{x} = \frac{x}{y}$

$3(x+2) = 21y+6$

$3x+6 = 21y+6$

$-6 \quad -6$

$\frac{3x}{3} = \frac{21y}{3}$

$x = 7y$

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13. Let $P = 5k + 4$ and $Q = 18 - 2k$. If $P = Q$, then what is the value of k ?

A) $k = -4$

B) $k = 4$

C) $k = 2$

D) k can be any rational number.

$5k+4 = 18-2k$

$+2k \quad +2k$

$7k+4 = 18$

$-4 \quad -4$

$\frac{7k}{7} = \frac{14}{7}$

$k = 2$

CHECK:

$5(2)+4 \stackrel{?}{=} 18-2(2)$

$10+4 \stackrel{?}{=} 18-4$

$14 = 14$ ✓