

MATH 01 - Arithmetic, Sec. B04-45391

First test. Time allowed: one hour. Professor Luis Fernández

NAME: _____

INSTRUCTIONS: Solve the following 25 exercises. Each is worth 4 points. **You must show all your work** in order to receive any credit. This includes all **sums, long divisions**, etc.

1. Add: $457 + 142$

Solution:

$$\begin{array}{r} 457 \\ + 142 \\ \hline 599 \end{array}$$

2. Add: $18257 + 4286$

Solution:

$$\begin{array}{r} 18257 \\ + 4286 \\ \hline 22543 \end{array}$$

3. Subtract: $9657 - 5324$

Solution:

$$\begin{array}{r} 9657 \\ - 5324 \\ \hline 4333 \end{array}$$

4. Subtract: $5657 - 4789$

Solution:

$$\begin{array}{r} 5657 \\ - 4789 \\ \hline 868 \end{array}$$

5. Multiply: 653×53

Solution:

$$\begin{array}{r} 653 \\ \times 53 \\ \hline 1959 \\ 3265 \\ \hline 34609 \end{array}$$

6. Multiply: 128×267

Solution:

$$\begin{array}{r} 128 \\ \times 267 \\ \hline 896 \\ 768 \\ 256 \\ \hline 34176 \end{array}$$

7. Divide, finding the quotient and remainder:
 $453 \div 8$

Solution:

$$\begin{array}{r} 56 \\ 8 \overline{) 453} \\ \underline{400} \\ 53 \\ \underline{48} \\ 5 \end{array}$$

Quotient: 56. Remainder: 5.

8. Divide, finding the quotient and remainder:
 $753 \div 31$

Solution:

$$\begin{array}{r} 24 \\ 31 \overline{) 753} \\ \underline{620} \\ 133 \\ \underline{124} \\ 9 \end{array}$$

Quotient: 24. Remainder: 9.

9. Divide, finding the quotient and remainder:
 $7532 \div 27$

Solution:

$$\begin{array}{r} 278 \\ 27 \overline{) 7532} \\ \underline{5400} \\ 2132 \\ \underline{1890} \\ 242 \\ \underline{216} \\ 26 \end{array}$$

Quotient: 278. Remainder: 26

10. $32 \div 0 =$ (circle the right answer below):

- a) 0
 b) Undefined
c) 32
d) 1

11. Find the value of the following expression:
 $6 + 4 \times 5$

Solution: $6 + 4 \times 5 = 6 + 20 = 26$

12. Find the value of the following expression:
 $4 \cdot 7 + 3 \cdot 4$

Solution: $4 \cdot 7 + 3 \cdot 4 = 28 + 12 = 40$

13. Find the value of the following expression:

$$4 + (-7) - 3 - (-5) + 8$$

Solution: Change subtraction to addition of the opposite and proceed left to right:

$$\begin{aligned} 4 + (-7) - 3 - (-5) + 8 &= 4 + (-7) + (-3) + 5 + 8 \\ &= (-3) + (-3) + 5 + 8 \\ &= (-6) + 5 + 8 \\ &= (-1) + 8 = 7 \end{aligned}$$

14. Find the value of the following expression:

$$2 \times 6^2 - (6 + 4) \times 5 - (8 \div 4 + 1)$$

Solution:

$$\begin{aligned} 2 \times 6^2 - (6 + 4) \times 5 - (8 \div 4 + 1) \\ &= 2 \times 36 - 10 \times 5 - (2 + 1) \\ &= 72 - 50 - 3 \\ &= 19 \end{aligned}$$

15. Add: $(-7) + 15$

Solution: $(-7) + 15 = 8$

16. Add: $(-82) + (-34)$

Solution: $(-82) + (-34) = (-116)$

17. Subtract: $(-12) - (-9)$

Solution: $(-12) - (-9) = (-12) + 9 = -3$

18. Subtract: $(-37) - 58$

Solution: $(-37) - (58) = (-37) + (-58) = (-95)$

19. Multiply: $(-12) \cdot (-9)$

Solution: $(-12) \cdot (-9) = 108$

20. Multiply: $(-37) \cdot 5$

Solution: $(-37) \cdot 5 = -185$

21. Divide: $(-12) \div (-4)$

Solution: $(-12) \div (-4) = 3$

22. Divide: $72 \div (-18)$

Solution: $72 \div (-18) = (-4)$

23. Find the value of $|-23|$

Solution: $|-23| = 23$

24. Find the value of $|5 - |-7||$

Solution: $|5 - |-7|| = |5 - 7| = |-2| = 2$

25. The temperature in Chicago on January 31st was 29 degrees below zero. On February 1st it was 23 degrees above zero. What was the increase in temperature between these days?

Solution: 29 below 0 is -29 . The increase from -29 to 23 is $23 - (-29) = 23 + 29 = 52$ degrees.