Module Test A   Module 1

Solve each of the following. Show your work.

1. $23 - 7 \times 3$
2

2. $10 + (6 - 4) - 2$
10

3. $6^2 - (2^3 + 4)$
24

4. $[20 \div 5 + 8] \times 10$
120

5. $9 + 7^2 - 3(8 - 1)$
37

6. $3^2 + 40 - [8 + 5 \times 2] - 4$
27

Determine if each number is divisible by 2, 3, 4, 5, 6, 9, or 10. List all the numbers each number is divisible by on the answer line provided. If the number is not divisible by any of the numbers, write "none" on the answer line provided.

7. 836 _____   **divisible by 2 and 4**

8. 52,331 _____   **none**

9. 1,080 _____   **divisible by 2, 3, 4, 5, 6, 9, and 10**

10. 11,150 _____   **divisible by 2, 5, and 10**

Circle the correct response for each problem.

11. Estimate using front-end estimation with rounding to the nearest hundred: Pedro purchases a television for $178 and a DVD player for $165. About how much does he pay for both items?

a. $343   **b.** $300   **c.** $350   **d.** $400

$400

12. Round to the nearest thousand: 34,950.

a. 34,000   **b.** 34,900   **c.** 35,000   **d.** 35,900

35,000

13. Estimate using front-end estimation without rounding: $347 + 274$.

a. 500   **b.** 600   **c.** 621   **d.** 630

500

14. Which is the smallest number divisible by 2, 3, 5, 6, 9, and 10?

a. 60   **b.** 90   **c.** 180   **d.** 270

90

15. In the expression $4 \times 37 - [2 \times 5(7 - 4)] + 5^2$, which calculation is performed first?

a. 4×37 **b.** 2×5 **c.** 5^2 **d.** $7 - 4$

$7 - 4$

16. Which of the following can be used to calculate (12)(18):

a. $(12)(20) - (12)(8)$ **b.** $(18)(10) - (18)(2)$ **c.** $(12)(20) - (12)(2)$ **d.** $(18)(10) - (18)(8$

$(12)(20) - (12)(2)$

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Name the property represented by each equation.

17. $185 \times 2 = 2 \times 185$ **Commutative Property of Multiplication**

18. $16(10 - 7) = (16)(10) - (16)(7)$ **Distributive Property of Multiplication over Subtraction**

19. $88 \times 0 = 0$ **Multiplicative Property of Zero**

20. $4(8 + 6) = (4)(8) + (4)(6)$ **Distributive Property of Multiplication over Addition**

21. $(5 \times 15) \times 6 = 5 \times (15 \times 6)$ **Associative Property of Multiplication**

22. $(22 + 8) + 4 = (8 + 22) + 4$ **Commutative Property of Addition**

23. $175 + 0 = 175$ **Identity Property of Addition**

Answer the following questions in the space provided.

24. Solve $(25 \times 213) \times 4$ using mental math and give a reason for each step.

Possible answer: $(25 \times 213) \times 4$

$4 \times (25 \times 213)$	**Commutative Property of Multiplication**
$(4 \times 25) \times 213$	**Associative Property of Multiplication**
100×213	**Multiplication**
21,300	**Multiplication**

25. Explain compatible numbers and then use compatible numbers to estimate the quotient $819 \div 47$.

Possible answer: Compatible numbers are numbers that are easy to work with mentally.

To estimate $819 \div 47$, use $800 \div 40 = 20$. So, $819 \div 47 \approx 20$.

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