

 **Module Test** **B** **Module 1** 

Solve each of the following. Show your work.

1.  $14 - 6 \times 2$   
**2**

2.  $7 + (5 - 3) - 1$   
**8**

3.  $8^2 - (3^3 + 5)$   
**32**

4.  $[12 \div 4 + 2] \times 5$   
**25**

5.  $5 + 8^2 - 9(6 - 4)$   
**51**

6.  $2^3 + 45 - [7 + 9 \times 3] - 1$   
**18**

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. 512      \_\_\_\_\_      **divisible by 2 and 4**

8. 10,980      \_\_\_\_\_      **divisible by 2, 3, 4, 5, 6, 9, and 10**

9. 46,231      \_\_\_\_\_      **none**

10. 2,080      \_\_\_\_\_      **divisible by 2, 4, 5, and 10**

Circle the correct response for each problem.

11. Estimate using front-end estimation without rounding: Pedro purchases a television for \$178 and a DVD player for \$165. About how much does he pay for both items?

a. \$200  
**\$200**                      b. \$300                      c. \$343                      d. \$350

12. Round to the nearest hundred: 21,950.

a. 21,000                      b. 21,900                      c. 22,000  
**22,000**                      d. 22,050

13. Estimate using front-end estimation with rounding to the nearest ten:  $347 + 274$ .

a. 500                      b. 600                      c. 620  
**620**                      d. 630

14. Which is the smallest number divisible by 2, 3, 4, 5, 6, and 10?

a. 60  
**60**                      b. 135                      c. 180                      d. 270

15. In the expression  $6 \times 45 - [(8 - 2) + 3 \times 7] + 4^3$ , which calculation is performed first?

a.  $6 \times 45$                       b.  $3 \times 7$                       c.  $4^3$                       d.  $8 - 2$   
**8 - 2**

16. Which of the following can be used to calculate  $(14)(16)$ :

a.  $(14)(20) - (14)(6)$     b.  $(14)(20) - (14)(4)$     c.  $(16)(10) - (16)(4)$     d.  $(16)(10) - (16)(6)$   
 **$(14)(20) - (14)(4)$**

Name the property represented by each equation.

17.  $5(14 + 3) = (5)(14) + (5)(3)$  **Distributive Property of Multiplication over Addition**
18.  $(32 \times 6) \times 4 = (6 \times 32) \times 4$  **Commutative Property of Multiplication**
19.  $43 + 0 = 43$  **Identity Property of Addition**
20.  $(5 + 15) + 6 = 6 + (5 + 15)$  **Commutative Property of Addition**
21.  $3(9 - 7) = (3)(9) - (3)(7)$  **Distributive Property of Multiplication over Subtraction**
22.  $(85 + 12) + 14 = 85 + (12 + 14)$  **Associative Property of Addition**
23.  $1 \times 321 = 321$  **Identity Property of Multiplication**

Answer the following questions in the space provided.

24. Solve  $25 \times (182 \times 4)$  using mental math and give a reason for each step.

**Possible answer:**  $25 \times (182 \times 4)$

$25 \times (4 \times 182)$  **Commutative Property of Multiplication**

$(25 \times 4) \times 182$  **Associative Property of Multiplication**

$100 \times 182$  **Multiplication**

**18,200** **Multiplication.**

25. Explain compatible numbers and then use compatible numbers to estimate the quotient  $732 \div 53$ .

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

To estimate  $732 \div 53$ , use  $720 \div 60 = 12$ . So,  $732 \div 53 \approx 12$ .

