Name _____

Topic **13**
Free-Response Test

Give each answer.

Tell if the equation is true or false.

1. $9 + 12 = (3 \times 3) + 12$

_____

2. $(4 \times 5) + 6 = (2 \times 10) + 6$

_____

3. $3 \times 3 - 3 = 6 - 3$

_____

4. $20 \div 2 \div 5 = 10 \div 2$

_____

Write the missing number that makes each equation true.

5. $(15 - 3) \div 2 = \square \div 2$

_____

6. $12 + \square = (3 \times 4) + 9$

_____

Write the missing numbers that make the equations true.

7. $n \div 7 = 5$

$n \div 7 \times \square = 5 \times \square$

$n = \square$

_____

8. $t - 38 = 19$

$t - 38 + \square = 19 + \square$

$t = \square$

_____

9. $s + 24 = 62$

$s + 24 - \square = 62 - \square$

$s = \square$

_____

10. $y \times 9 = 72$

$y \times 9 \div \square = 72 \div \square$

$y = \square$

_____

Solve.

11. $d + 9 = 13$

_____

12. $m - 23 = 47$

_____

13. $17 + s = 29$

_____

14. $z - 61 = 39$

_____

Name _____

Solve.

15. $t \times 8 = 56$

_____

16. $q \div 5 = 9$

_____

17. $n \times 7 = 49$

_____

18. $p \div 6 = 8$

_____

Use the underlined letter to write two related equations that match the situation. Solve.

19. In 5 years Jason will be 16 years old. How old is he now?

_____

20. After Noah spent $16 on his brother's birthday present, he had $7 left. How much money did Noah have before he bought the present?

_____

21. Ashley practices piano for the same length of time each day, six days a week. If she practices 240 minutes a week, how many minutes does she practice each day?

_____

22. The fourth-grade class packaged 360 seeds into plastic bags for a science project. If each bag contains 10 seeds, how many bags are there?

_____

23. **Writing to Explain**
Explain why the equations $20 \div n = 4$ and $n \div 20 = 4$ have different solutions.

_____

_____

_____

_____

_____