SYLVAN ADVANCED MATH

INITIAL UNIT ASSESSMENT

Algebra 1

Unit #1 *(CA)*

Pre-A. Solve. Record the answer as a fraction or mixed number.

$$4-\frac{3}{8}+\frac{6}{7}$$

Pre-B. Solve. Record the answer as a fraction or mixed number.

$$\left(7\bullet\frac{1}{6}\right)+\frac{2}{3}$$

Complete the table for powers of 10's. Complete problems 1-4.

INPUT		OUTPUT
10^2	10 x 10	100
10^3	10 x 10 x 10	1000
10^4	10 x 10 x 10 x 10	10000
10^5	10 x 10 x 10 x 10 x 10	**(1)**.
(2).	**(3)**.	**(4)**.

5. What is a possible rule for the input and output shown in the table?

INPUT	0	1	2	3	4
OUTPUT	1	4	7	10	13

6. Evaluate $\sqrt{78}$ to the nearest whole number.

7. What name is given to the set of numbers described by {1, 2, 3, 4, 5, …}

8. Evaluate $2x^3+x$ if $x=-2$

9. Given a=2 and $b=3$, evaluate $\frac{-3a+4}{8b}$.

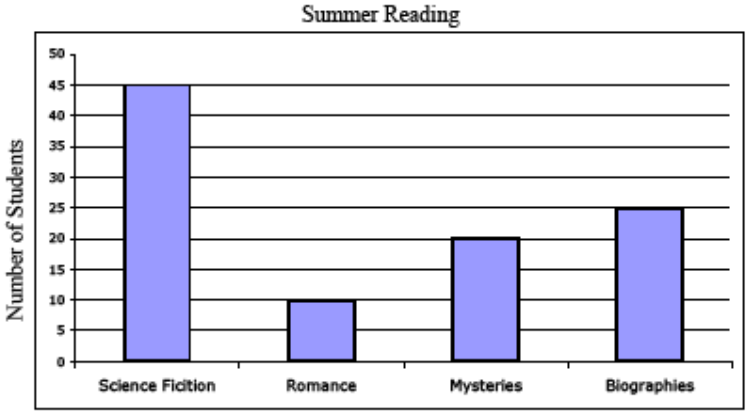
Translate the descriptions in problems 10 and 11 into a mathematics expression, equation, or inequality.

10. Six times a number divided by two is the same as three times the number.

11. Adding four to x is greater than 15.

A survey of student's summer reading is displayed graphically below. **Answer questions 12 and 13.**

12. What type of book was chosen by one-fourth of the students?



13. Display the data from the bar graph in a circle graph.

14. Simplify: $2+(-4)\bullet 3$.

15. Which property, commutative or associative of addition, is illustrated below.

$12 + (-3) = (-3) + 12$

16. Name the property illustrated below for multiplication.

$(-2 \bullet 4) \bullet 1 = -2 \bullet (4 \bullet 1)$

17. Simplify the expression.

$$\left(\frac{1}{2}\right)\left(\frac{-1}{3}\right)(-4)$$

18. Simplify the expression.

$$\frac{(1.5)(3.6)}{-2}$$

19. Simplify the expression.

$$-6(5+x)$$

20. Simplify the expression.
$$7x^2 - x + 3x^2$$

21. Simplify the expression.
$$(4b + 6c) - (4b - 6c)$$

22. Simplify the expression.
$$\frac{12x - 15}{3}$$

23. Evaluate the expression $\frac{8m + 2n}{-3n + 4}$ for $m = 3$ and $n = -2$.