School786
AN ONLINE SCHOOL

Name: Due Date: Teacher: Parent Sign:

1. Evaluate $3x + 5$ when $x = 4$.

2. Evaluate $2(a - 3)$ when $a = 7$.

3. Evaluate $(5 + b) \times 2$ when $b = 9$.

4. Evaluate $12 - 4y$ when $y = 2$.

5. Evaluate $7 + 3 \times 4$ (use order of operations).

6. Evaluate $(7 + 3) \times 4$ (use order of operations).

7. Which is larger, $3(8 + 5)$ or $(3 \times 8) + 5$?

8. Without calculating full totals, which is larger: $199 + 312$ or $200 + 311$? Explain quickly.

9. Which is larger for every value of x: $4x + 10$ or $4(x + 10)$? Explain.

10. If $x = 0$, which is greater: $2x + 7$ or $2(x + 7)$?

11. Simplify and then evaluate $5(2 + c)$ when $c = 3$.

12. Evaluate $8 - (2 + m)$ when $m = 3$.

13. For $n = 6$, is $3n + 4$ equal to $3(n + 4)$? Explain.

14. Compare $6 \times 17 + 6 \times 3$ with $6 \times (17 + 3)$. Which is larger or are they equal?

15. Without calculating exact values, decide which is larger: $482 + 299$ or $483 + 298$.

16. Evaluate $4p - 2$ when $p = 5$.

17. If $t = 10$, which is bigger: $t + 50$ or $(t + 5) + 45$? Without computing full sums, explain.

18. For which value of x is $3x + 4 = 4x - 1$?

19. Does the expression $2x + 5$ increase or decrease when x increases? Explain in one sentence.

20. Does the expression $50 - x$ increase or decrease when x increases? Explain.

21. Find a number k so that $7 + k = 3 \times (2 + k)$. (Solve for k.)

22. Which expression gives a larger value for any whole number n: $n + 10$ or $(n + 5) + 5$? Explain.

23. If $a = 2$, which is larger: $3(a + 4)$ or $3a + 4$? Compute to check.

24. Without computing exact products, which is larger: 25×48 or $25 \times 47 + 25$?

25. Simplify then evaluate: $2(3 + d) + 4$ when $d = 1$.

26. True or false: $(8 + 5) + 2 = 8 + (5 + 2)$. Explain why.

27. True or false: $5(2 + 3) = 5 \times 2 + 3$. Explain.

28. For which integers x is $2x + 1$ an odd number? (Short reasoning)

29. Compare these two expressions when $x = 5$: $2(x + 3)$ and $2x + 3$. Which is larger?

30. Which is larger for any positive x: $x + x + x$ or $3x$? Explain.

31. If m increases by 2, how does the value of $4m + 6$ change? (Give the numeric change.)

32. If y is doubled, how does the value of $7 + y$ change? (Describe change in words.)

33. Find x so that 5x = 30. Then evaluate 5x + 4.

34. Without calculating completely, decide which is larger: 999 + 201 or 1000 + 200.

35. The value of expression A is 3(10 + x). The value of expression B is 30 + 3x. Are A and B always equal? Explain.

36. Which gives a bigger value: (x + 2) + 3 or x + (2 + 3)? Explain.

37. Tony says 6 x (4 + 5) is less than (6 x 4) + 5. Is Tony correct? Why or why not?

38. Fill in a digit d (0-9) to make 12 + d = 3 x (4 + d). What is d?

39. A bag has t apples. Sam adds 4 apples and then doubles the total. Write an expression for the final number of apples. If t = 3, how many apples now?

40. Two expressions: 4(x + 1) and 4x + 1. For x = 10, which is larger and by how much?

41. A recipe calls for 2n cups of flour. If n = 3, how many cups? Then write an equivalent expression by doubling n first and then multiplying.

42. Which is larger: (a + b) or (a x b), if a = 1 and b = 7? What about a = 2 and b = 3? (Short answers)

43. True or false: adding the same number to both expressions keeps their difference the same. Example: Are (7 + 3) - (4 + 3) and 7 - 4 equal? Explain.

44. If x = -1, compute 3x + 9 and 3(x + 3). Are they equal? (Note: sixth-grade level may include simple negatives.)

45. Which is larger for x = 20: 0.5x + 5 or 0.5(x + 5)? Compute to compare.

46. The expression 10 + 2k is equal to 2(5 + k). Are these expressions equal for all k? Explain.

47. Without calculating exact values, decide which is larger: 1,234 + 5,678 or 1,235 + 5,677.

48. A student writes (3 + 4) x 2 = 3 + (4 x 2). Is this correct? Explain.

49. Which of these two grows faster as x increases: x + 100 or 100x? Explain briefly.

50. Sara has 2m + 7 stickers; Ben has 3m - 1 stickers. For what m (whole numbers) does Ben have more stickers than Sara? (Solve inequality 3m - 1 > 2m + 7.)