Name: Due Date: Teacher: Parent Sign:

1. In an experiment, plants are measured every day. Which is the independent variable: day number or plant height?

2. In the same experiment, which is the dependent variable: day number or plant height?

3. If height (cm) = 2 × day and day = 5, what is the height?

4. Given the rule y = 3x, what is y when x = 4?

5. Given the rule y = x + 3, what is y when x = 6?

6. If x is the independent variable and the table shows x: 1, 2, 3 and y = 2x, what is y when x = 3?

7. If a car travels at 10 km each hour, distance (km) = 10 × hours. How far in 3 hours?

8. For the relation y = 5x, what is y when x = 0?

9. If temperature depends on time and time = 7 hours, which variable is independent?

10. For the rule y = x - 1, what is y when x = 2?

11. A graph has a point at (4, 9). What is the independent-variable value for that point?

12. For the point (4, 9), what is the dependent-variable value?

13. Table: x: 2, 4, 6; y = x + 1. What is y when x = 6?

14. If number of pages read depends on days and you read 5 pages per day, how many pages in 7 days?

15. Given y = 2x + 1, what is y when x = 2?

16. If x is independent and values are 0,1,2 and y = 3x, what is y at x = 1?

17. A point on a graph is (0, 5). What is the independent-variable value?

18. A point on a graph is (0, 5). What is the dependent-variable value?

19. Input-output machine: multiply by 4. If input is 3, what is output?

20. Rule: y = x + 5. If x = 10, find y.

21. If number of apples picked depends on baskets and each basket holds 6 apples, how many apples in 4 baskets?

22. Table: x: 1,2,3; y: 4,8,12. What rule connects x to y? (write as y = ?)

23. Using rule y = 4x, what is y when x = 5?

24. If distance = speed × time and speed = 8 $\frac{km}{h}$, how far in 2 hours?

25. Given y = 7x and x = 3, what is y?

26. A graph has points (1,3) and (2,6). If pattern continues (proportional), what is y when x = 5?

27. If the independent variable is minutes and you save 2 cents per minute, how much after 15 minutes?

28. Rule: y = x × 0 (zero rule). What is y for any x = 9?

29. If y = x + x (i.e., y = 2x), what is y when x = 7?

30. Table shows x: 0,1,2 and y: 3,4,5. What is y when x = 3 if the rule is y = x + 3?

31. A point on a graph is (8, 24). If y = 3x, does this point fit the rule? (Yes or No)

32. If plants gain 1 cm per day starting at 2 cm, height = day + 2. What is height on day 6?

33. Rule: $y = 10 - x$. If $x = 3$, what is y?

34. If the independent variable is coins and dependent is value in cents, what is the dependent value for 7 coins worth 10 cents each?

35. Given $y = 6x$ and $x = 2$, find y.

36. A coordinate point is $(3, 0)$. What is the dependent-variable value?

37. If $y = x \times 2$ and $x = 0$, what is y?

38. Input-output: add 3. If input is 4, what is output?

39. Table: x: 2, 3, 4; y: 5, 6, 7. What is the rule $y = ?$

40. A graph point is $(5, 15)$. If $y = 3x$, find y when $x = 7$.

41. If the independent variable is hours of practice and dependent is score and each hour raises score by 2, starting at 0, what is score after 4 hours?

42. Rule: $y = x + 10$. If $x = 1$, what is y?

43. If number of tiles laid depends on rows and each row has 9 tiles, how many tiles in 6 rows?

44. Given the pair $(2, 5)$ and rule $y = 2x + 1$, check if the pair fits the rule. (Yes or No)

45. If $y = 3x - 0$ and $x = 4$, what is y?

46. A graph shows point $(10, 30)$. What is the independent-variable value?

47. In the rule $y = x + 2$, if $y = 9$, what is x?

48. If output $=$ input $\times 5$ and output $= 25$, what is input?

49. Given table x: 1, 2, 3; y: 2, 3, 4 and rule $y = x + 1$, what is y when $x = 10$?

50. If each pencil costs 2 dollars and cost depends on number of pencils, what is cost for 8 pencils?