

## Homework: Variables and Expressions

**I. Indicate with math symbols what operations are being described by the given word(s). Use +, -,  $\times$ , or  $\div$  symbols.**

- |                    |                       |                          |
|--------------------|-----------------------|--------------------------|
| 1. sum _____       | 2. product _____      | 3. decreased by _____    |
| 4. quotient _____  | 5. increased by _____ | 6. difference _____      |
| 7. more than _____ | 8. less than _____    | 9. twice something _____ |

**II. Write a verbal expression for the algebraic expression.**

- |                   |                          |
|-------------------|--------------------------|
| 10. $ab$          | 11. $x + 7$              |
| 12. $2x$          | 13. $m^3$                |
| 14. $x - 6$       | 15. $8y^2$               |
| 16. $\frac{x}{y}$ | 17. $\frac{1}{2}(x + y)$ |
| 18. $3x - 4$      | 19. $5(a - b)$           |

**III. Write an algebraic expression to the given verbal expression.**

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|--|--|
| 20. eight less than a number             | 21. a number increased by seven                        |
| 22. the quotient of $m$ and $n$          | 23. a number squared                                   |
| 24. nine times a number                  | 25. a number decreased by three                        |
| 26. seven more than the cube of a number | 27. one-half the product of $x$ and $y$                |
| 28. the product of twice $a$ and $b$     | 29. twice the product of $a$ and $b$                   |
| 30. two less than five times a number    | 31. twice a number increased by three times the number |
| 32. the sum of 3 times $a$ and $b$       | 33. three times the sum of $a$ and $b$                 |
| 34. the cube of $a$ plus $b$             | 35. the cube of the sum of $a$ and $b$                 |