

Write each expression as a power.

- |                            |                         |
|----------------------------|-------------------------|
| 19. $7^4 \times 7^5$       | 20. $9^6 \times 9^{-4}$ |
| 21. $8^{-3} \times 8^{-5}$ | 22. $6^7 + 6^3$         |
| 23. $5^{-7} + 5^{-2}$      | 24. $4^{-2} + 4^6$      |
| 25. $(3^3)^4$              | 26. $(9^{-2})^4$        |
| 27. $(8^{-1})^{-5}$        | 28. $-(2^{-3})^{-2}$    |

Evaluate.

- |                         |                       |
|-------------------------|-----------------------|
| 35. $3^2 \times 3^2$    | 36. $4^7 + 4^5$       |
| 37. $2^4 \times 2^{-3}$ | 38. $3^2 + 3^{-1}$    |
| 39. $5^2 \times 5^{-4}$ | 40. $6^{-2} + 6^0$    |
| 41. $7^{-4} + 7^{-5}$   | 42. $6^{-3} + 6^{-3}$ |

Evaluate.

- |                                       |   |
|---------------------------------------|---|
| 47. $2^3 \times 2^{-2} \times 2^{-2}$ | 48. $3^4 + 3^5 \times 3$                  |
| 49. $3^0 + 3^3$                       | 50. $4^2 - 2^{-1}$                        |
| 51. $5^3 + 3^2$                       | 52. $2^{-2} + 5^0$                        |
| 53. $2^3 \times 2^{-1} + 5$           | 54. $(6 - 3)^{-2}$                        |
| 55. $(9^0 + 2^0)^{-1}$                | 56. $\frac{1}{2^{-2}} + \frac{1}{3^{-1}}$ |
| 57. $\frac{2^{-1}}{3^{-1}}$           | 58. $\frac{-3^{-2}}{4^{-1}}$              |

Simplify.

- |  |                                    |
|--|------------------------------------|
| 65. $x^4 \times x^3$                   | 66. $x^{-2} \times x^3$            |
| 67. $y^{-1} \times y^{-3}$             | 68. $t^8 + t^4$                    |
| 69. $m^6 + m^{-2}$                     | 70. $b^{-2} + b^{-4}$              |
| 71. $(m^4)^2$                          | 72. $(t^{-2})^4$                   |
| 73. $(y^{-5})^{-2}$                    | 74. $m^3 \times m^{-2} \times m^4$ |
| 75. $\frac{a^{-4} \times a^{-2}}{a^2}$ | 76. $\frac{t^4 \times t^3}{t^9}$   |
| 77. $y^{-3} \times y^7 \times y^{-5}$  | 78. $t^{-4} + t^{-6} \times t^6$   |
| 79. $n^5 \times n^{-6} + n$            |                                    |

Answers

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|--------------|-------------------|--------------------|--------------------|--------------------|
| 19. $7^9$    | 20. $9^2$         | 21. $8^{-8}$       | 22. $6^4$          |                    |
| 23. $5^{-5}$ | 24. $4^{-8}$      | 25. $3^{12}$       | 26. $9^{-8}$       | 27. $8^5$          |
|              |                   |                    | 28. $(-2)^4$       | 35. 81             |
| 36. 16       | 37. 2             | 38. 27             | 39. $\frac{1}{25}$ | 40. $\frac{1}{36}$ |
|              |                   |                    | 41. 7              | 42. 1              |
|              |                   |                    |                    | 47. $\frac{1}{2}$  |
|              |                   |                    |                    | 48. 1              |
| 49. 28       | 50. 15.5          | 51. 134            | 52. $\frac{5}{4}$  | 53. 9              |
|              |                   |                    | 54. $\frac{1}{9}$  | 55. $\frac{1}{2}$  |
| 56. 7        | 57. $\frac{3}{2}$ | 58. $\frac{-4}{9}$ | 65. $x^7$          | 66. $x$            |
|              |                   |                    | 67. $y^{-4}$       | 68. $t^4$          |
|              |                   |                    | 69. $m^8$          |                    |
|              |                   |                    | 70. $b^2$          | 71. $m^4$          |
|              |                   |                    | 72. $t^{-8}$       | 73. $y^{10}$       |
|              |                   |                    | 74. $m^5$          | 75. $n^{-8}$       |
|              |                   |                    | 76. $t^{-2}$       |                    |
|              |                   |                    | 77. $y^{-1}$       | 78. $t^2$          |
|              |                   |                    | 79. $n^{-2}$       |                    |