

Chapter 1 Review Worksheet

Please copy the problem and show all work on another sheet of paper. Box answers. Make sure that you use the order of operations and circle the ONE simplification you make per step. When translating or stating the property, you must choose the most accurate.

Translate. Do NOT use “plus”, “minus”, “times”, or “divided by”.

- 1) $10 - x$
- 2) $\frac{3}{4}x^2$
- 3) the quotient of seven and a number
- 4) twice the sum of three and a number

Solve each equation.

- 5) $x = 10^3 - 5^4$
- 6) $y = 140 \div [2(8 - 3)]$

State whether each equation is TRUE or FALSE for the value given.

- 7) $x^3 - x^2 + x < 130$; $x = 6$
- 8) $5x^2 - 3(4) = 8$; $x = 2$

Use the distributive property to simplify.

- 9) $3(402)$
- 10) $6(895)$

Find the solution set for the inequality if the replacement set is $x = \{1, 5, 11\}$

- 11) $6x - 2 < 5x + 9$

Simplify.

- 12) $(8 - 3)(12 \div 4) - 5$
- 13) $\frac{8^2 - 12(2)}{2(5)} + 7$
- 14) $[2^4 - (1 + 4)2]8$
- 15) $5(3x + 7)$
- 16) $9x + 5y - y + 10z + 8y + z$
- 17) $3(8x + 1) + 2x$
- 18) $10 + 3(4ac + 11b) + ac$
- 19) $3[10 + 2(3x - 4)]$

Name the property illustrated.

- 20) $(3 + 2) + 100 = 3 + (2 + 100)$
- 22) $15 + 7 = 7 + 15$
- 21) $3(x) + 3(10) = 3(x + 10)$
- 23) $8 \cdot 1 = 8 \cdot 1$
- 24) If $2 + 3 = 5$ and $5 = 20 \div 4$, then $2 + 3 = 20 \div 4$
- 25) (a) $4 + 2 \cdot 3 \cdot \frac{1}{2} + 5 \cdot 0 = 4 + 3 \cdot 2 \cdot \frac{1}{2} + 5 \cdot 0$
(b) $= 4 + 3 \cdot (2 \cdot \frac{1}{2}) + 5 \cdot 0$
(c) $= 4 + 3 \cdot 1 + 5 \cdot 0$
(d) $= 4 + 3 + 5 \cdot 0$
(e) $= 4 + 3 + 0$
(f) $= 7 + 0$
(g) $= 7$