

Chapter 1 Test

Write the equivalent algebraic expression. (1.1)

- Ricky is 8 years older than his brother.
- The sum of two numbers.
- One fifth a number decreased by nine.
- Twice the sum of three numbers.
- Twice the difference of two numbers.
- Half a number reduced by five.

Write the equivalent English sentence. (1.1)

- $5m + 12$
- $Jack - Rosa = 15$
- $3x - 7$
- $x + y$
- $2x + 11$
- $2x - 17$

Evaluate. (1.2)

- $2 + 7 \times 3 - 10 + 18 \div 3 - 24 \div 3 \times 2$
- $13 - 18 \div 6 + 40 + 26 \div 2 - 28 \div 7 \times 4$
- $2(36 - 6) \div 4 + 32 - (12 \times 8 \div 12 - 2) + 6 \times 8$
- $6 - (92 + 20 \times 5) \div [2 + 7 + (7 + 4^2 \times 5)] + 33$
- $1 + 23 \times 2 - 9 + 28 \div 14 - 27 \div 3 \times 4$
- $8 + 65 \div 5 + 16 + 51 \div 17 + 44 \div 4 \times 5$

Determine if sequence is arithmetic (A), geometric (G), or neither (N). Find next two numbers (1.3)

- ...3, 7, 11, 15, 19, ...
- ...7, 21, 63, 189, ...
- ...18, 12, 6, 0, ...
- ...9, 11, 14, 18, ...
- ...-3.2, 1.3, 5.8, 10.3 ...
- ...4, 9, 16, 25, ...

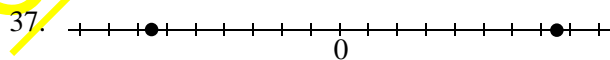
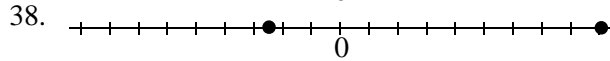
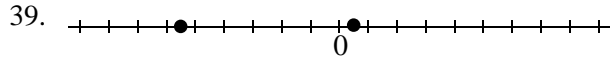
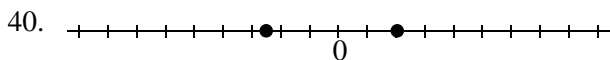
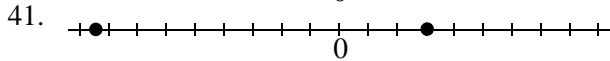
Find the algebraic property. (1.4)

- $2 + 1 + 14 + 9 = 9 + 1 + 14 + 2$
- $9(8) + 9(4) + 9(2) = 9(8 + 4 + 2)$
- $11 + 0 = 11$
- $23 \times 6 \times 4 \times 18 = 4 \times 6 \times 18 \times 23$
- $(18 \times 19) \times 7 = 18 \times (19 \times 7)$
- $4(12 + 11 + 13) = 4(12) + 4(11) + 4(13)$

Solve. (1.5)

- Sandra paid \$20,400 in sales taxes for a brand-new racing car. If the price of the racing car is \$240,000, what is the sales tax rate where she lives?
- The CD player you bought cost you \$48.00. If the sales tax rate in your city is 8.5%, what was the total you paid, including tax?
- If you borrow \$35,000 at 12.25% interest per year, how much do you owe after one year, including interest?
- Rooster received a 14% raise. If his new salary is \$102,030, find his old salary.
- What was the original price of a computer for which Kenya paid \$540 if the computer was advertised "10% off"?
- While running a 5000-meter race, Felix falls and is unable to continue. If he had just passed the 2,500-meter mark, what percent of the race did Felix fail to complete?

Find the distance between the two points. (1.6)

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