

Algebra 1 - Literal Equations and Formulas - Test

Common Core A-CED.A.4, A-REI.A.1 · maths-pdf.fr/en/

Name: _____ Class: _____ Date: ____/____/____

This test checks literal equations and formulas for Common Core A-CED.A.4. It has 9 questions worth 20 points in all, and you have 45 minutes. Write clear steps, because points are awarded for method as well as for the final answer. Leave a few minutes to review.

About this test

- Grade: Algebra 1
- Chapter: Literal Equations and Formulas
- Standards: A-CED.A.4, A-REI.A.1
- Time: 45 minutes
- Total: 20 points

Question 1 - Solve for a side [2 pts]

- Solve $V = lwh$ for w . (1 point)
- Solve $y = mx + b$ for m . (1 point)

Question 2 - Standard form [2 pts]

Solve $4x + 5y = 20$ for y .

Question 3 - Trapezoid height [2 pts]

Solve $A = \frac{1}{2}h(a+b)$ for h .

Question 4 - Variable on both sides [2 pts]

Solve $ax - 3 = bx + 7$ for x , where $a \neq b$.

Question 5 - Find the principal [2 pts]

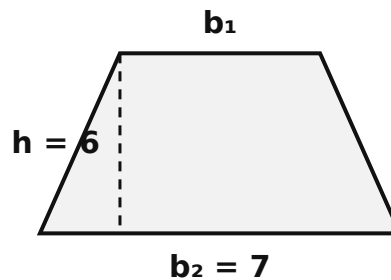
I	r	t
\$225	0.05	3 years

Known values.

Simple interest is $I = Prt$. Solve the formula for P , then find the principal that earns the interest shown in the table.

Question 6 - Interest rate [2 pts]

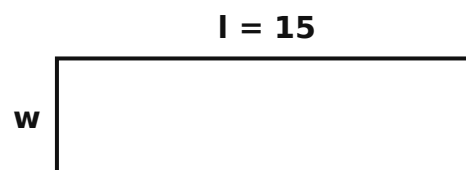
Simple interest is $I = Prt$. Mei earns \$270 on \$1,500 after 3 years. Solve the formula for r and find the annual rate as a percent.

Question 7 - Trapezoid base [3 pts]

Trapezoid with area 54 square feet.

A trapezoid has area $A = 54$ square feet, height 6 feet, and bottom base 7 feet. The area formula is $A = \frac{1}{2}(b_1 + b_2)h$.

- Solve the formula for b_1 . (2 points)
- Find the top base. (1 point)

Question 8 - Rectangle width [3 pts]

Rectangle with perimeter 50.

A rectangle has perimeter 50 meters and length 15 meters.

- a. Solve $P = 2l + 2w$ for w . (1 point)
- b. Find the width. (1 point)
- c. Find the area. (1 point)

Question 9 - Find the error [2 pts]
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A student solved $3x + 2y = 12$ for y and wrote $y = 12 - 3x$. Explain the error and write the correct equation.