



PROBLEMS AND SOLUTIONS - FORMULAS AND WORD PROBLEMS
Prepared by Ingrid Stewart, Ph.D., College of Southern Nevada
Please Send Questions and Comments to ingrid.stewart@csn.edu. Thank you!

PLEASE NOTE THAT YOU CANNOT USE A CALCULATOR ON THE ACCUPLACER - ELEMENTARY ALGEBRA TEST! YOU MUST BE ABLE TO DO THE FOLLOWING PROBLEMS WITHOUT A CALCULATOR!

Problem 1:

Solve the "mark up" formula $M = S - C$ for S .

Problem 2:

Solve the interest formula $I = PRT$ for R . It stands for *Interest = Principal × Rate × Time*.

Problem 3:

Solve the formula $P = 2(b + s)$ for b .

Problem 4:

Solve the formula $y = mx + b$ for m .

Problem 5:

Solve the Fahrenheit-Celsius conversion formula $F = \frac{9}{5}C + 32$ for C .

Problem 6:

Solve the formula for calculating the circumference of a circle $C = 2\pi r$ for r .

Problem 7:

If a number is divided by 3 and then 2 is added, the result is 10. What is the number?

Problem 8:

Three times a number is 6 more than 30. What is the number?

Problem 9:

One Student 1 completed two more than 5 times as many homework assignments as Student 2. Together they completed 50 homework assignments. How many homework assignments did each student complete?

Problem 10:

Three parts totaling 27 lb are packaged for shipping. Two parts weigh the same. The third part weighs 3 lb less than each of the two equal parts. Find the weight of each part.

Problem 11:

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Problem 12:

A student purchased a used physics textbook, a used Spanish textbook and a graphing calculator. If the calculator cost twice as much as the Spanish book and the physics book cost \$70, what was the cost of the calculator and the Spanish book? The total before tax was \$235.



SOLUTIONS

You can find detailed solutions below the link for this problem set!

1. $S = M + C$	2. $R = \frac{I}{PT}$	3. $b = \frac{P - 2s}{2}$
4. $m = \frac{y - b}{x}$	5. $C = \frac{5}{9}(F - 32)$	6. $r = \frac{C}{2\pi}$
7. The number is 24.	8. The number is 12.	9. Student 1 completed 42 homework assignments and Student 2 completed 8.
10. Two parts weigh 10 lb each and the third part weighs 7 lb.	11. 40 mL of medicine were used.	12. Spanish book \$55 and Calculator \$110