



**PROBLEMS AND SOLUTIONS - DECIMALS AND WHOLE NUMBERS**  
Prepared by Ingrid Stewart, Ph.D., College of Southern Nevada  
Please Send Questions and Comments to [ingrid.stewart@csn.edu](mailto:ingrid.stewart@csn.edu). Thank you!

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

The solutions are listed below the problem set!

**Problem 1:**

Find the sum of  $180 + 87 + 15$  without a calculator.

**Problem 2:**

Find the sum of  $67.9 + 23 + 0.34$  without a calculator.

**Problem 3:**

Find the difference of  $8,034 - 5,679$  without a calculator.

**Problem 4:**

Find the difference of  $201 - 72.35$  without a calculator.

**Problem 5:**

Find the product of  $528(203)$  without a calculator.

**Problem 6:**

Find the product of  $567(1000)$  without a calculator.

**Problem 7:**

Find the product of  $0.291(0.14)$  without a calculator.

**Problem 8:**

Find the product of  $24.5(100)$  without a calculator.

**Problem 9:**

Find the quotient of  $7 \overline{)2135}$  without a calculator.

**Problem 10:**

Find the quotient of  $8 \overline{)5.6}$  without a calculator.

**Problem 11:**

Find the quotient of  $2.3 \overline{)3.68}$  without a calculator.

**Problem 12:**

Find the quotient of  $567 \div 10000$  without a calculator.

**Problem 13:**

Find the quotient of  $786580 \div 100$  without a calculator.

**Problem 14:**

Find the quotient of  $198.78 \div 10$  without a calculator.

**Problem 15:**

Round **6,296** to the nearest thousands place.

**Problem 16:**

Round **96.7945** to the nearest hundredths place!

**Problem 17:**

Round **5,371** to the nearest hundreds place.

**Problem 18:**

Round **1,795** to the nearest tens place.

**Problem 19:**

Round **58.6854** to the nearest tenths place!

**Problem 20:**

Round **21.1974** to the nearest hundredths place!

**Problem 21:**

Estimate the sum of  **$0.935 + 12.54 + 152.07 + 18$**  by rounding to tens. Then find the exact sum.

**Problem 22:**

Estimate the sum of  **$24,003 + 5,874 + 319,467 + 52,855$**  by rounding to thousands. Then find the exact sum.

**Problem 23:**

Estimate the difference of  **$427.45 - 125$**  by rounding to hundreds. Then find the exact sum.

**Problem 24:**

Estimate the difference of  **$4,048 - 36$**  by rounding to tens. Then find the exact sum.

**Problem 25:**

Estimate the cost of 38 light bulbs if each bulb costs \$1.15 by rounding to one nonzero digit. Then find the exact price.

**Problem 26:**

Estimate the cost of 54 knobs for your new kitchen cabinets if each knob costs \$3.40 by rounding to one nonzero digit. Then find the exact price.

**Problem 27:**

The owner of a sandwich shop tells you that he will charge you \$108 for 18 sandwiches that you want to buy for your party. Estimate the cost of one sandwich by rounding to one nonzero digit. Then find the exact price.

**Problem 28:**

The florist tells you that she will charge you \$915 for 25 flower baskets that you want to place on each table at your wedding reception. Estimate the cost of one basket by rounding to one nonzero digit. Then find the exact price.

**Problem 29:**

Which of the following numbers is the smallest?

0.016      0.106      0.16      0.601

**Problem 30:**

Which of the following numbers is the smallest?

0.097    0.3    0.103    0.023

**Problem 31:**

A painter worked 3 hours on Monday and 3.5 times as many hours on Tuesday. Which of the following ways should be used to calculate how many hours the painter worked on both days?

$3 + 3.5$      $3 \times (3.5 + 3)$      $3 \cdot 3.5$      $3 + (3.5 \times 3)$

**Problem 32:**

A waiter worked 8 hours on Friday and 1.5 times as many hours on Saturday. Which of the following ways should be used to calculate how many hours the waiter worked on both days?

$8 + (1.5 \times 8)$      $8 + 1.5$      $8 \times (1.5 + 8)$      $8 \times 1.5$

**Problem 33:**

On four tests, a student had the grades of 78, 89, 45, and 80. What is her average grade?

**SOLUTIONS**

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

1. 282	2. 91.24	3. 2,355
4. 128.65	5. 107,184	6. 567,000
7. 0.04074	8. 2,450	9. 305
10. 0.7	11. 1.6	12. 0.0567
13. 7,865.8	14. 19.878	15. 6,000
16. 96.79	17. 5,400	18. 1,800
19. 58.7	20. 21.20	21. 180; 183.545
22. 402,000; 402,199	23. 300; 302.45	24. 4010; 4012
25. \$40; \$43.70	26. \$150; \$183.60	27. \$5; \$6
28. \$30; \$36.60	29. 0.016	30. 0.023
31. $3 + (3.5 \times 3)$	32. $8 + (1.5 \times 8)$	33. 73