Test One

This is a self-diagnostic test. Every pair of questions relates to a worksheet in a series available in the MUMS the WORD series. For example question 5 relates to worksheet 1.5 *Percentages*. If you score 100% then we feel you are adequately prepared for your introductory statistics course. For those of you who had trouble with a few of the questions, we recommend working through the appproriate worksheets and associated computer aided learning packages in this series.

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1 (a) $3 \times (2 + 5) - 6 \div 3$

(b) $3 \times 3 + 2 \times 1 + 4 \div 2$

2 (a) What are the prime factors of 60?

(b) What is the biggest number that divides 27 and 36?

3 (a) Simplify $\frac{10}{25}$.

(b) Calculate $\frac{3}{8} + \frac{3}{10}$.

4 (a) Write $\frac{1}{20}$ as a decimal.

(b) Write 0.06 as a fraction.

5 (a) Find 10 percent of 75.

(b) Write $\frac{3}{5}$ as a percentage of a whole.

6 (a) Calculate $-8 + 10$.

(b) Calculate $2 - 6$.

7 (a) Calculate -4×-3.

(b) Calculate $-6/3$.

8 (a) Simplify $3^3 \times 2$.

(b) Simplify $\sqrt{2} \times \sqrt{8}$.

9 (a) Simplify $x - (5 + x)$.

(b) Simplify $\frac{x}{3} + \frac{x}{2}$.

10 (a) Expand and collect like terms:
$(x + y)(x - y)$.

(b) If $x = 2$ and $y = 5$, what is the value of $3x + 2y$?

Answers to Test One

1. (a) 19 (b) 13
2. (a) 2, 3, 5 (b) 9
3. (a) $\frac{2}{5}$ (b) $\frac{27}{40}$
4. (a) 0.05 (b) $\frac{6}{100}$
5. (a) 7.5 (b) 60%
6. (a) 2 (b) -4
7. (a) 12 (b) -2
8. (a) 54 (b) 4
9. (a) -5 (b) $\frac{5x}{6}$
10. (a) $x^2 - y^2$ (b) 6