

Required Algebraic Skills

Psychology 310

Introduction

- # Certain basic skills from high school algebra are required to participate effectively in Psychology 310.
- # These examples will help you identify whether you have these skills.
- # If you find the examples difficult, we will help you acquire the necessary background.

Topics of Discussion

- # Manipulating equalities
- # Manipulating parentheses
- # Completing the square
- # Symbolic products

Manipulating Equalities

- # Suppose $Y = 3X - 5$

- # Solve for X

Answer:

$$Y + 5 = 3X$$
$$\frac{Y + 5}{3} = X$$

Manipulating Parentheses

- ⌘ Consider the following

$$2(A + 3B - 4)$$

- ⌘ Remove parentheses by distributing the 2

Answer:

$$2A + 6B - 8$$

Manipulating Parentheses

- ⌘ Consider the following

$$-(A - 3B - 4)$$

- ⌘ Remove parentheses by distributing the minus sign

Answer:

$$-A + 3B + 4$$

Completing the Square

- ⌘ Expand the following

$$(A + B)^2$$

- ⌘ *Answer:*

$$A^2 + B^2 + 2AB$$

Completing the Square

- ⌘ Expand the following

$$(2A + 3B)^2$$

- ⌘ *Answer:*

$$4A^2 + 9B^2 + 12AB$$

Symbolic Products

- # Expand the following

$$(2A + B)(3C)$$

- # *Answer:*

$$6AC + 3BC$$

Symbolic Products

- # Expand the following

$$(X + Y)(X - Y)$$

- # *Answer:*

$$X^2 - Y^2$$

Conclusion

- # If you found the previous examples routine, you should have no problem with the mathematical level in this course.
- # If you found the examples difficult or did not understand them at all, you need to seek assistance upgrading your algebraic skills. We can help you.