

**Probability and Statistics**  
**454**  
**Summer Work Packet**  
**(Anthony)**

## Welcome to Statistics!

This course is an introduction to statistics and data analysis. You will be completing daily, in-class investigations designed to help you understand basic statistical calculations, data collection, and an introduction to inference. You will learn how to analyze topics of interest from a statistical perspective. In order to do so, you must prepare by reviewing math skills that will help you quickly and accurately analyze data. You do not need Algebra skills beyond Algebra 2 in this class, but strong understanding of algebra is required.

Summer Assignments:

- 1) Practice Exercises – these are due the first day of class. Do not use a calculator unless specifically asked to do so. Show your work!
- 2) Purchase or borrow a graphing statistical calculator such as the TI-84+CE, TI-84+, TI nspire CX, or TI nspire CX CAS.
- 3) Prepare a three-ring binder for the first day of class. The binder should have 2 sections. Section one should have regular loose leaf paper. Section two should have graph paper.

### Practice Exercises

**Find a fraction of a number.**

1) Find  $\frac{5}{8}$  of 72

2) Find  $\frac{6}{7}$  of 72

3) Find  $\frac{9}{10}$  of 125

4) Find  $\frac{3}{4}$  of 175

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**Find a percent of a number.**

5) Find 23% of 170

6) Find 8.2% of 120

7) Find 12.25% of 56

8) Find 0.016% of 48

9) Find 0.18% of 80

### Fraction/Decimal/Percent Equivalents

10) Complete the chart.

Fraction	Decimal	Percent
$\frac{2}{3}$		
	0.125	
		95%
	0.003	
		0.017%
$\frac{5}{12}$		
$\frac{7}{16}$		
	0.307	
		2.015%
	2.04	

**Determine if a fraction is greater than or less than  $\frac{1}{2}$ .**

11) Is  $\frac{1}{4}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

12) Is  $\frac{3}{6}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

13) Is  $\frac{5}{6}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

14) Is  $\frac{3}{4}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

15) Is  $\frac{5}{8}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

16) Is  $\frac{1}{3}$  greater than, less than, or equal to  $\frac{1}{2}$  ?

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**Add fractions**

17)  $\frac{5}{7} + \frac{2}{4}$

18)  $\frac{10}{22} + \frac{7}{11}$

19)  $\frac{8}{14} + \frac{2}{7}$

20)  $\frac{5}{27} + \frac{1}{9}$

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**Subtract fractions**

21)  $\frac{6}{8} - \frac{2}{12}$

22)  $\frac{5}{11} - \frac{2}{12}$

23)  $\frac{2}{3} - \frac{3}{9}$

24)  $\frac{4}{6} - \frac{2}{5}$

25)  $\frac{8}{9} - \frac{8}{27}$

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**Substitute a value for a variable in an expression**

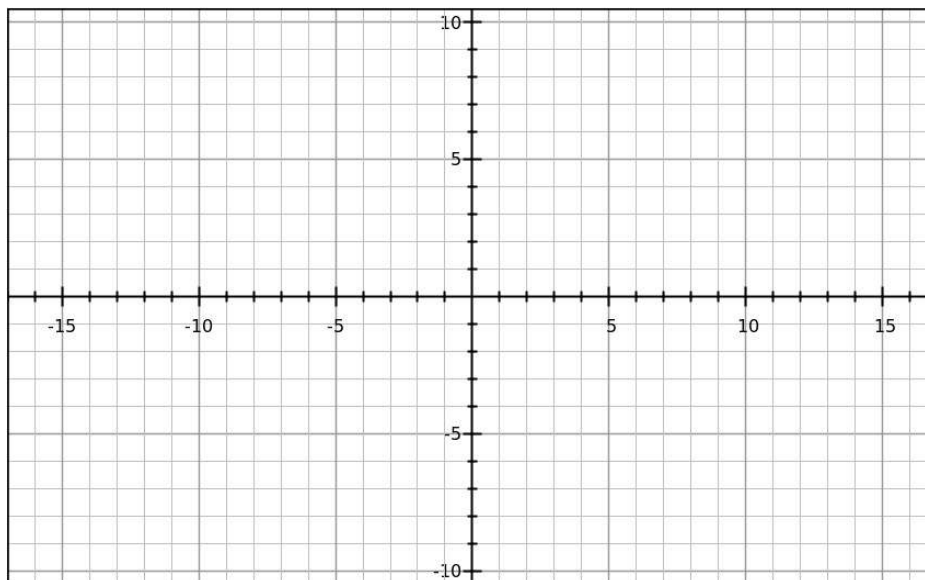
26) Find the value of  $y = 48.1825x - 118.25$  when  $x = 45$

27) Find the value of  $y = 62.138x - 11.23$  when  $x = 64$

28) Find the value of  $y = 0.614x + 124.7$  when  $x = 40$

**Graph lines in slope-intercept form.**

29) Graph  $y = -6.25x + 10$



30) Graph the following inequality  $y \leq 2.5x + 3$

