

ECON 2500
Fall 2009
Dr. Tufte

Homework 1

Due: Wednesday, September 9, at the start of class.

Do only parts (a) and (c) of each problem. There is no partial credit; if you get all of them right I won't make you do more of these, but if you miss one or more, I'll make you do (b) and (d) for a grade.

You may work on these together. You may use any resource you have available, as long as you show some of your work. All answers must be handwritten, with clearly circled answers.

1) Simplify:

$$a) \frac{390}{154} = \frac{195}{77}$$

$$b) \frac{2431}{165}$$

$$c) \frac{1547}{1105} = \frac{7}{5}$$

$$d) \frac{187}{34034}$$

2) Simplify:

$$a) \frac{315588}{7735} = \frac{204}{5}$$

$$b) \frac{365014650}{12}$$

$$c) \frac{1021020}{60690} = \frac{286}{17}$$

$$d) \frac{353925}{7657650}$$

3) Simplify:

a) $\frac{170170x}{19110} = 187x/21$

b) $\frac{92820y}{29988xy}$

c) $\frac{6545xz}{19890yz} = 77x/234y$

d) $\frac{1123122xyz}{156156z}$

4) Simplify:

a) $\frac{170170/19110}{92820/29988} = 187/65$

b) $\frac{6545/19890}{1123122/156156}$

c) $\frac{2479620/27300}{46410/35458566} = 85,009,639/1225$

d) $\frac{4620/84234150}{168300/33183150}$

5) Is this true:

a) $\frac{42}{35} = \frac{6}{5}$ Yes

b) $\frac{20}{868} = \frac{10}{429}$

c) $\frac{429x}{30030x} = \frac{33}{2310}$ Yes

d) $\frac{77}{910} = \frac{1309y}{15470}$

6) Is it true that:

a) If $\frac{429}{510510} = \frac{42x}{595}$, that $255255 = 21441420x$ Yes

b) If $\frac{10}{429x} = \frac{1309}{15470}$, that $1547000 = 561561x$

c) If $\frac{x}{y} = \frac{2a}{b}$, that $2ax=by$ No

d) If $\frac{3x}{3y} = \frac{4a}{6b}$, that $3bx=2ay$