Unit 1:

Math & Your Job

Name: _____

Teacher: _____

Period: _____

Day 1 - Reading Work Schedules

The following work schedule shows when each employee must work during the week of July 13-18. Fred, Grace, Henry, and Isabella are full-time employees, and Jordan is a part-time employee. Each employee is required to report to work 30 minutes before their shift in order to cover lunch breaks. Use the work schedule to answer the questions:

Work Schedule: July 13-18			
	Day Shift 9 A.M. – 5 P.M.	Midday Shift 11 A.M. – 7 P.M.	Evening Shift 12 P.M. – 8 P.M.
Monday	Fred	Henry	Isabella
Tuesday	Fred, Henry	Grace	Isabella
Wednesday	Grace, Isabella	Fred	Jordan
Thursday	Grace, Henry	Jordan	Isabella
Friday	Henry, Jordan	Grace	Fred
Saturday	Grace, Isabella	Fred	Henry

1. Who works from 12 p.m. to 8 p.m. on Tuesday?

2. Does any worker work two shifts in a row? Yes or No? Explain your answer.

3. What shift does Henry work on Thursday?

4. What day is Isabella off?

5. Which employee is part time? How many hours does he or she work?

6. On Tuesday who is working in the following time slots (do not consider breaks)?

   a. 9AM-11AM: _____

   b. 11AM-12PM: _____

   c. 12PM-5PM: _____

   d. 5PM-7PM: _____

   e. 7PM-8PM: _____

   f. Why are there different numbers of workers at different times during the day?

7. Fred cannot work his Monday shift. What two people could he ask to switch with so that no person has over 40 hours of work for the week? (Remember that he cannot switch with someone who is already working that day).

8. Plan a set 30 minute break time for each shift that makes sense and always leaves the store with as many workers as possible.

   a. Day Shift Worker 1:_____

   b. Day Shift Worker 2:_____

   c. Midday Shift:_____

   d. Evening Shift:_____

9. Other than Jordan, whose schedule would you like to have the most? Why?

Reading Work Schedules cont.

Lucy runs a bakery in Albany. Each week she schedules her "front staff" to cover 3 morning shifts, 5 midday shifts, and 2 evening shifts Monday through Friday. (Fewer are needed on the weekends.) Because Lucy hires several part-time workers, the schedule changes weekly. She asks her employees for any special schedule requests, does what she can to accommodate their wishes, and posts the schedule on Friday for the following week. Use the schedule to answer the questions on the next page.

Employee	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Kyle	12 PM – 8 PM	12 PM – 8 PM	12 PM – 8 PM		12 PM – 8 PM	10 AM – 5 PM	
Mary	6:30 AM-1:30 PM	6:30 AM-1:30 PM	6:30 AM-1:30 PM		6:30 AM-1:30 PM		
Nicholas	7 AM-1 PM		7 AM-1 PM	7 AM-1 PM			
Oliver		7 AM-1 PM		6:30 AM-1:30 PM		10 AM-4 PM	11 AM-4 PM
Peggy Sue	11 AM-7 PM	10 AM-4 PM	10 AM-4 PM	12 PM – 8 PM	2 PM-7 PM		
Rick		11:30 AM-1:30 PM		12 PM – 8 PM	2 PM-7 PM		
Stephanie	7:30 AM-1 PM		4 PM-7 PM		7 AM-1 PM	6:30 AM-1:30 PM	11 AM-5 PM
Thomas		4 PM-7 PM	7:30 AM-1 PM			7 AM-1 PM	6:30 AM-1:30 PM
Alyssa		7:30 AM-9:30 AM		7:30 AM-1 PM	7:30 AM-1 PM		7 AM-1 PM

1. How many hours will Kyle work next week?

2. Stephanie has only been working about 20 hours a week. Now that her finals are over, she asked Lucy to give her more hours. Was Lucy able to accommodate Stephanie's wishes? How many hours is Stephanie scheduled to work this week?

3. Oliver is taking classes on Mondays, Wednesdays, and Fridays and has asked not to work on class days if possible. Was Lucy able to accommodate Oliver?

4. The opening manager is always scheduled to work a half-an-hour before the bakery opens (7AM). Who are the opening managers this week and on which days do they open?

5. In order to cash out each night, the closing manager is scheduled to work an hour past closing time (7 PM weekdays and 4 PM weekends). Who are the closing managers this week and on which days do they close?

6. When an employee works a closing shift one day and an opening shift the next, it is called "doubling back." Lucy tries not to schedule anyone to double back whenever possible. Is anyone scheduled to "double back" this week? If so, who and when?

Day 2 - Calculating Total Payment Due Based on Hourly Rates

Converting Surplus Minutes into Hours

1. Remember, 60 minutes = _____

2. Therefore, 104 minutes = _____

3. 86 minutes = _____

4. 152 minutes = _____

5. 15 hours and 96 minutes = _____

6. 35 hours and 183 minutes = _____

Calculating Time Worked in a Day

1. How long did you work if you worked from 7:45 AM to 4:30 PM?

Start: Next Hour: Last Hour: End:

2. How long did you work if you worked from 8:12 AM to 3:44 PM?

Start: Next Hour: Last Hour: End:

3. How long did you work if you worked from 6:56 AM to 2:45 PM?

Start: Next Hour: Last Hour: End:

4. How long did you work if you worked from 9:05 AM to 4:00 PM?

Start: Next Hour: Last Hour: End:

Converting Extra Minutes into a Fraction or Decimal of an Hour

1. 15 minutes is what fraction of an hour?

   Convert that fraction to a decimal.

2. 43 minutes is what fraction of an hour?

   Convert that fraction to a decimal.

3. 72 minutes is what fraction of an hour?

   Convert that fraction to a decimal.

Calculating Final Payment Due

1. Let's say you worked for 31 hours and 20 minutes at a rate of $7.25 an hour. How much money did you make?

2. Let's say you worked for 37 hours and 49 minutes at a rate of $8.60 an hour. How much money did you make?

3. Let's say you worked for 25 hours and 132 minutes at a rate of $8.85 an hour. How much money did you make?

Calculating Total Payment Due
Based on Hourly Rates

Susie is in charge of payroll at her company. She uses the following timecards to determine how many hours each employee has worked and how much they should be paid based on their current hourly rate. Help Susie find the total payment due for the following employees:

**Don't forget to convert the total hours and minutes worked into a decimal before multiplying by the current hourly rate.*

1. Timecard for Abagail Murphy:

Day	Time In	Time Out	Hours Worked
Monday	**6:30 A.M.**	**2:00 P.M.**	
Tuesday	**6:35 A.M.**	**2:05 P.M.**	
Wednesday	**6:30 A.M.**	**2:15 P.M.**	
Thursday	**6:32 A.M.**	**2:02 P.M.**	
Friday	**6:55 A.M.**	**2:33 P.M.**	

Total Hours Worked: _____

Current Hourly Rate of Pay: $8.75

Total Payment Due: _____

2. Timecard for Bruce Jones:

Day	Time In	Time Out	Hours Worked
Monday	7:00 A.M.	2:20 P.M.	
Tuesday	6:55 A.M.	2:35 P.M.	
Wednesday	7:03 A.M.	2:28 P.M.	
Thursday	6:45 A.M.	2:33 P.M.	
Friday	6:58 A.M.	2:27 P.M.	

Total Hours Worked: _____
Current Hourly Rate of Pay: $7.25

Total Payment Due: _____

3. Timecard for Celina Diaz:

Day	Time In	Time Out	Hours Worked
Monday	6:55 A.M.	2:30 P.M.	
Tuesday	6:55 A.M.	2:30 P.M.	
Wednesday	6:58 A.M.	2:30 P.M.	
Thursday	6:45 A.M.	2:35 P.M.	
Friday	6:58 A.M.	2:45 P.M.	

Total Hours Worked: _____
Current Hourly Rate of Pay: $8.50

Total Payment Due: _____

4. Timecard for David Smith:

Day	Time In	Time Out	Hours Worked
Monday	10:06 A.M.	5:10 P.M.	
Tuesday	10:08 A.M.	5:02 P.M.	
Wednesday	10:10 A.M.	5:07 P.M.	
Thursday	10:01 A.M.	5:08 P.M.	
Friday	11:00 A.M.	6:05 P.M.	

Total Hours Worked: _____
Current Hourly Rate of Pay: $9.75

Total Payment Due: _____

5. Timecard for Elaina Rodriquez:

Day	Time In	Time Out	Hours Worked
Monday	9:00 A.M.	1:05 P.M.	
Tuesday	9:05 A.M.	1:14 P.M.	
Wednesday	8:55 A.M.	1:15 P.M.	
Thursday	6:00 A.M.	1:00 P.M.	
Friday	9:02 A.M.	1:04 P.M.	

Total Hours Worked: _____
Current Hourly Rate of Pay: $10.15

Total Payment Due: _____

Day 3 - Comparing Jobs

The Scenario:

You are searching for a job, and you have found three different possibilities.

Option 1:

The first is a desk job at a local office which pays $15.00 an hour.

1) How much money will you make in 8 hours at the desk job in a really busy 8-hour day?

2) How much money will you make in 8 hours at the desk job in a really slow 8-hour day?

Option 2:

The second job is as a waiter/waitress at a local restaurant. You will be paid 3.00 an hour plus tips which are usually 15% of the cost of the food you serve.

3) How much money do you make as a waitress in an 8-hour day even if you do not sell any food?

4) How much money do you make as a waitress in an 8-hour day if the total amount of food you sell costs $100?

5) How much money do you make as a waitress in an 8-hour day if the total amount of food you sell costs $200?

6) How much money do you make as a waitress in an 8-hour day if the total amount of food you sell costs:

a) $300?
b) $400?
c) $500?
d) $600?
e) $700?
f) $800?
g) $900?
h) $1000?

Option 3

The third job is at a department store as a salesperson in the small electronics department. Here you will make $10.00 an hour plus a commission of 6% of your sales.

7) How much money do you make as a salesperson in an 8-hour day even if you do not sell any electronics?

8) How much money do you make as a salesperson in an 8-hour day if the total amount of electronics you sell cost $100?

9) How much money do you make as a salesperson in an 8-hour day if the total amount of electronics you sell cost $200?

10) How much money do you make as a salesperson in an 8-hour day if the total amount of electronics you sell cost:

a) $300?
b) $400?
c) $500?
d) $600?
e) $700?
f) $800?
g) $900?
h) $1000?

Comparisons:

You decide to compare the jobs two at a time. (Assume it is an 8 hour work day.)

11) About how much food would you have to sell to make more serving than at the desk job?

12) How much electronic equipment would you need to sell to make more at that job than the desk job?

13) How much food do you have to sell to make more serving than at the electronics store?

a) Why is this question harder to answer?

b) What would we need to know to answer it?

14) You do more research, and you find out that on average, a waitress/waiter at that restaurant sells $820 of food in a day. At the electronics store, the average salesperson sells $750 worth of electronics goods. Calculate the average daily pay for each of the three jobs. (Assume an 8 hour workday)

a) Job #1:

b) Job #2:

c) Job #3:

d) Based on this information, which job would you choose and why?

15) Your friend lives in another state where the rates are different.
The desk job she is investigating pays $18.00 per hour.
The local restaurant pays $3.30 per hour with 15% tips. The waitresses typically sell $600 worth of food per 8 hour shift.
A local expensive shoe store pays its employees $9.00 per hour with a 4% commission on sales. Since the shoe store is popular, the average sales person sells $1500 worth of shoes in a day.

16) Calculate the average daily pay for each of the three jobs for an 8 hour day.

a) Job #1:

b) Job #2:

c) Job #3:

17) Based on this information, which job would you choose and why?

Reflection:

18) What other factors are important for you in choosing a job? How much more money would you have to make at your least favorite of the three jobs to make it worth choosing?

Day 4 - Reading Tax Tables

William Smith is an accountant that specializes in taxes. Each year he helps his clients figure out what information they need to calculate their adjusted gross income (the income on which they will be taxed). After they have figured out their adjusted gross income, they need to calculate their deductions (how much they have already paid) and how much they still owe. The IRS publishes tax tables each year in order to calculate the taxes owed. Use the sample tax table on the next page to answer the following questions.

1. How much tax would a single person have to pay on an adjusted income of $24,668?

2. How much tax would a married couple filing jointly have to pay on an adjusted income of $28,852?

3. How much tax would a head of a household have to pay on an adjusted income of $29,019?

4. If you are single and owe $3,581 in income tax, what was your income range for the year covered in the table?

5. If you are married filing separately and owe $5,855 in income tax, what was your income range for the year covered in the table?

Our tax code is tiered so that it uses different tax rates for different levels of income. For instance, if you are a married couple filing jointly and make less than $41,150, you would pay a 15% income tax. For every dollar earned above $41,150, a tax of 28% is imposed.

6. Using the tiered tax rates from the example above, how much tax would a married couple filing jointly earning $48,150 owe?

7. Look at the tax table on the next page. Pay careful attention to how the taxes increase as you go from one salary interval to the next. When you notice a larger jump, this is the salary where the next tier of the tax code is located. Try to determine how much a single person can make before they cross from the 15% to 28% category. (hint: it's somewhere in the 24,000's)

8. Use your answer to question #7 and your knowledge of tiered taxes to determine how much tax a single person earning $32,000 would owe.

If line 38 (taxable income) is—		And you are—				If line 38 (taxable income) is—		And you are—				If line 38 (taxable income) is—		And you are—			
At least	But less than	Single	Married filing jointly *	Married filing separately	Head of a household	At least	But less than	Single	Married filing jointly *	Married filing separately	Head of a household	At least	But less than	Single	Married filing jointly *	Married filing separately	Head of a household
		Your tax is—						Your tax is—						Your tax is—			
23,000						**26,000**						**29,000**					
23,000	23,050	3,454	3,454	3,769	3,454	26,000	26,050	4,083	3,904	4,609	3,904	29,000	29,050	4,923	4,354	5,449	4,354
23,050	23,100	3,461	3,461	3,783	3,461	26,050	26,100	4,097	3,911	4,623	3,911	29,050	29,100	4,937	4,361	5,463	4,361
23,100	23,150	3,469	3,469	3,797	3,469	26,100	26,150	4,111	3,919	4,637	3,919	29,100	29,150	4,951	4,369	5,477	4,369
23,150	23,200	3,476	3,476	3,811	3,476	26,150	26,200	4,125	3,926	4,651	3,926	29,150	29,200	4,965	4,376	5,491	4,376
23,200	23,250	3,484	3,484	3,825	3,484	26,200	26,250	4,139	3,934	4,665	3,934	29,200	29,250	4,979	4,384	5,505	4,384
23,250	23,300	3,491	3,491	3,839	3,491	26,250	26,300	4,153	3,941	4,679	3,941	29,250	29,300	4,993	4,391	5,519	4,391
23,300	23,350	3,499	3,499	3,853	3,499	26,300	26,350	4,167	3,949	4,693	3,949	29,300	29,350	5,007	4,399	5,533	4,399
23,350	23,400	3,506	3,506	3,867	3,506	26,350	26,400	4,181	3,956	4,707	3,956	29,350	29,400	5,021	4,406	5,547	4,406
23,400	23,450	3,514	3,514	3,881	3,514	26,400	26,450	4,195	3,964	4,721	3,964	29,400	29,450	5,035	4,414	5,561	4,414
23,450	23,500	3,521	3,521	3,895	3,521	26,450	26,500	4,209	3,971	4,735	3,971	29,450	29,500	5,049	4,421	5,575	4,421
23,500	23,550	3,529	3,529	3,909	3,529	26,500	26,550	4,223	3,979	4,749	3,979	29,500	29,550	5,063	4,429	5,589	4,429
23,550	23,600	3,536	3,536	3,923	3,536	26,550	26,600	4,237	3,986	4,763	3,986	29,550	29,600	5,077	4,436	5,603	4,436
23,600	23,650	3,544	3,544	3,937	3,544	26,600	26,650	4,251	3,994	4,777	3,994	29,600	29,650	5,091	4,444	5,617	4,444
23,650	23,700	3,551	3,551	3,951	3,551	26,650	26,700	4,265	4,001	4,791	4,001	29,650	29,700	5,105	4,451	5,631	4,451
23,700	23,750	3,559	3,559	3,965	3,559	26,700	26,750	4,279	4,009	4,805	4,009	29,700	29,750	5,119	4,459	5,645	4,459
23,750	23,800	3,566	3,566	3,979	3,566	26,750	26,800	4,293	4,016	4,819	4,016	29,750	29,800	5,133	4,466	5,659	4,466
23,800	23,850	3,574	3,574	3,993	3,574	26,800	26,850	4,307	4,024	4,833	4,024	29,800	29,850	5,147	4,474	5,673	4,474
23,850	23,900	3,581	3,581	4,007	3,581	26,850	26,900	4,321	4,031	4,847	4,031	29,850	29,900	5,161	4,481	5,687	4,481
23,900	23,950	3,589	3,589	4,021	3,589	26,900	26,950	4,335	4,039	4,861	4,039	29,900	29,950	5,175	4,489	5,701	4,489
23,950	24,000	3,596	3,596	4,035	3,596	26,950	27,000	4,349	4,046	4,875	4,046	29,950	30,000	5,189	4,496	5,715	4,496
24,000						**27,000**						**30,000**					
24,000	24,050	3,604	3,604	4,049	3,604	27,000	27,050	4,363	4,054	4,889	4,054	30,000	30,050	5,203	4,504	5,729	4,504
24,050	24,100	3,611	3,611	4,063	3,611	27,050	27,100	4,377	4,061	4,903	4,061	30,050	30,100	5,217	4,511	5,743	4,511
24,100	24,150	3,619	3,619	4,077	3,619	27,100	27,150	4,391	4,069	4,917	4,069	30,100	30,150	5,231	4,519	5,757	4,519
24,150	24,200	3,626	3,626	4,091	3,626	27,150	27,200	4,405	4,076	4,931	4,076	30,150	30,200	5,245	4,526	5,771	4,526
24,200	24,250	3,634	3,634	4,105	3,634	27,200	27,250	4,419	4,084	4,945	4,084	30,200	30,250	5,259	4,534	5,785	4,534
24,250	24,300	3,641	3,641	4,119	3,641	27,250	27,300	4,433	4,091	4,959	4,091	30,250	30,300	5,273	4,541	5,799	4,541
24,300	24,350	3,649	3,649	4,133	3,649	27,300	27,350	4,447	4,099	4,973	4,099	30,300	30,350	5,287	4,549	5,813	4,549
24,350	24,400	3,656	3,656	4,147	3,656	27,350	27,400	4,461	4,106	4,987	4,106	30,350	30,400	5,301	4,556	5,827	4,556
24,400	24,450	3,664	3,664	4,161	3,664	27,400	27,450	4,475	4,114	5,001	4,114	30,400	30,450	5,315	4,564	5,841	4,564
24,450	24,500	3,671	3,671	4,175	3,671	27,450	27,500	4,489	4,121	5,015	4,121	30,450	30,500	5,329	4,571	5,855	4,571
24,500	24,550	3,679	3,679	4,189	3,679	27,500	27,550	4,503	4,129	5,029	4,129	30,500	30,550	5,343	4,579	5,869	4,579
24,550	24,600	3,686	3,686	4,203	3,686	27,550	27,600	4,517	4,136	5,043	4,136	30,550	30,600	5,357	4,586	5,883	4,586
24,600	24,650	3,694	3,694	4,217	3,694	27,600	27,650	4,531	4,144	5,057	4,144	30,600	30,650	5,371	4,594	5,897	4,594
24,650	24,700	3,705	3,701	4,231	3,701	27,650	27,700	4,545	4,151	5,071	4,151	30,650	30,700	5,385	4,601	5,911	4,601
24,700	24,750	3,719	3,709	4,245	3,709	27,700	27,750	4,559	4,159	5,085	4,159	30,700	30,750	5,399	4,609	5,925	4,609
24,750	24,800	3,733	3,716	4,259	3,716	27,750	27,800	4,573	4,166	5,099	4,166	30,750	30,800	5,413	4,616	5,939	4,616
24,800	24,850	3,747	3,724	4,273	3,724	27,800	27,850	4,587	4,174	5,113	4,174	30,800	30,850	5,427	4,624	5,953	4,624
24,850	24,900	3,761	3,731	4,287	3,731	27,850	27,900	4,601	4,181	5,127	4,181	30,850	30,900	5,441	4,631	5,967	4,631
24,900	24,950	3,775	3,739	4,301	3,739	27,900	27,950	4,615	4,189	5,141	4,189	30,900	30,950	5,455	4,639	5,981	4,639
24,950	25,000	3,789	3,746	4,315	3,746	27,950	28,000	4,629	4,196	5,155	4,196	30,950	31,000	5,469	4,646	5,995	4,646
25,000						**28,000**						**31,000**					
25,000	25,050	3,803	3,754	4,329	3,754	28,000	28,050	4,643	4,204	5,169	4,204	31,000	31,050	5,483	4,654	6,009	4,654
25,050	25,100	3,817	3,761	4,343	3,761	28,050	28,100	4,657	4,211	5,183	4,211	31,050	31,100	5,497	4,661	6,023	4,661
25,100	25,150	3,831	3,769	4,357	3,769	28,100	28,150	4,671	4,219	5,197	4,219	31,100	31,150	5,511	4,669	6,037	4,669
25,150	25,200	3,845	3,776	4,371	3,776	28,150	28,200	4,685	4,226	5,211	4,226	31,150	31,200	5,525	4,676	6,051	4,676
25,200	25,250	3,859	3,784	4,385	3,784	28,200	28,250	4,699	4,234	5,225	4,234	31,200	31,250	5,539	4,684	6,065	4,684
25,250	25,300	3,873	3,791	4,399	3,791	28,250	28,300	4,713	4,241	5,239	4,241	31,250	31,300	5,553	4,691	6,079	4,691
25,300	25,350	3,887	3,799	4,413	3,799	28,300	28,350	4,727	4,249	5,253	4,249	31,300	31,350	5,567	4,699	6,093	4,699
25,350	25,400	3,901	3,806	4,427	3,806	28,350	28,400	4,741	4,256	5,267	4,256	31,350	31,400	5,581	4,706	6,107	4,706
25,400	25,450	3,915	3,814	4,441	3,814	28,400	28,450	4,755	4,264	5,281	4,264	31,400	31,450	5,595	4,714	6,121	4,714
25,450	25,500	3,929	3,821	4,455	3,821	28,450	28,500	4,769	4,271	5,295	4,271	31,450	31,500	5,609	4,721	6,135	4,721
25,500	25,550	3,943	3,829	4,469	3,829	28,500	28,550	4,783	4,279	5,309	4,279	31,500	31,550	5,623	4,729	6,149	4,729
25,550	25,600	3,957	3,836	4,483	3,836	28,550	28,600	4,797	4,286	5,323	4,286	31,550	31,600	5,637	4,736	6,163	4,736
25,600	25,650	3,971	3,844	4,497	3,844	28,600	28,650	4,811	4,294	5,337	4,294	31,600	31,650	5,651	4,744	6,177	4,744
25,650	25,700	3,985	3,851	4,511	3,851	28,650	28,700	4,825	4,301	5,351	4,301	31,650	31,700	5,665	4,751	6,191	4,751
25,700	25,750	3,999	3,859	4,525	3,859	28,700	28,750	4,839	4,309	5,365	4,309	31,700	31,750	5,679	4,759	6,205	4,759
25,750	25,800	4,013	3,866	4,539	3,866	28,750	28,800	4,853	4,316	5,379	4,316	31,750	31,800	5,693	4,766	6,219	4,766
25,800	25,850	4,027	3,874	4,553	3,874	28,800	28,850	4,867	4,324	5,393	4,324	31,800	31,850	5,707	4,774	6,233	4,774
25,850	25,900	4,041	3,881	4,567	3,881	28,850	28,900	4,881	4,331	5,407	4,331	31,850	31,900	5,721	4,781	6,247	4,781
25,900	25,950	4,055	3,889	4,581	3,889	28,900	28,950	4,895	4,339	5,421	4,339	31,900	31,950	5,735	4,789	6,261	4,789
25,950	26,000	4,069	3,896	4,595	3,896	28,950	29,000	4,909	4,346	5,435	4,346	31,950	32,000	5,749	4,796	6,275	4,796

* This column must also be used by a qualifying widow(er).

Continued on next page

Day 5 - Income Taxes

I. <u>Federal Tax Rates</u>. Sometimes, your income range is not listed in the tax tables published like the ones we used on the last page. Instead you must use the following table to calculate your federal income tax:

Schedule X--Single		
If taxable income is over--	**But not over--**	**The tax is:**
$0	$7,550	10% of the amount over $0
$7,550	$30,650	$755 plus 15% of the amount over 7,550
$30,650	$74,200	$4,220.00 plus 25% of the amount over 30,650
$74,200	$154,800	$15,107.50 plus 28% of the amount over 74,200
$154,800	$336,550	$37,675.50 plus 33% of the amount over 154,800
$336,550	no limit	$97,653.00 plus 35% of the amount over 336,550

"Of the amount over" means how much more money you made than that amount!

Example: If you made $80,000, you would pay _____ plus _____% of the extra _____.

In addition to the federal income tax, you must also pay New York State Tax, Social Security Tax, and Medicare Tax. Use the table and rates below, to determine these taxes.

II. <u>New York State Tax Rates</u>:

Single and Married Filing Separately		
If taxable income is over--	**But not over--**	**The tax is:**
$0	$8000	4%
$8,000	$11,000	$320 plus 4.5% of the amount over $8,000
$11,000	$13,000	$455 plus 5.25% of the amount over $11,000
$13,000	$20,000	$560 plus 5.9% of the amount over $13,000
$20,000	$100,000	$973 plus 6.85% of the amount over $20,000
$100,000	$500,000	$6,453 plus 7.25% of the amount over $100,000
$500,000	no limit	$35,453 plus 7.7% of the amount over $500,000

Example: If you made $80,000, you would pay _____ plus _____% of the extra _____.

III. <u>Social Security Tax Rate</u>: 6.2% of total income

Example: If you made $80,000, you would pay _____ % of _____.

IV. <u>Medicare Tax Rate</u>: 1.45% of total income

Example: If you made $80,000, you would pay _____ % of _____.

Your total taxes on the $80,000 would be _____+_____+_____+_____=_____.

This is what percent of the $80,000?

For each problem we will be assuming that you are a single person. Use the tax tables and rates from the previous page to answer questions 1-4.

1) If you make $15,000 per year, …

   a. How much do you pay in federal taxes?

   b. How much do you pay in state taxes?

   c. How much do you pay for social security?

   d. How much do you pay for Medicare?

   e. How much do you pay yearly for all four income taxes?

   f. What percent of your income goes to these taxes?

Withholdings: The money deducted by an employer from an employee's gross wage earnings as mandated by federal and state taxing authorities.

It is important to understand that this **tax is not paid all at once at the end of the year**. A small part of what you owe is taken out of each paycheck for taxes. At the end of the year you just owe a little more or you get a little back depending on a number of other factors. These are beyond what you need to know for this class.

1a) You had $2,000 withheld during the year from your paychecks for federal taxes. Will you receive a refund or owe more money at the end of the year? How much?

1b) You had $725 withheld during the year from your paychecks for state taxes. Will you receive a refund or owe more money at the end of the year? How much?

2) If you make $50,000 per year, …

a. How much do you pay in federal taxes?

b. How much do you pay in state taxes?

c. How much do you pay for social security?

d. How much do you pay for Medicare?

e. How much do you pay yearly for all four income taxes?

f. What percent of your income goes to these taxes?

2a) You had $9,000 withheld during the year from your paychecks for federal taxes. Will you receive a refund or owe more money at the end of the year? How much?

2b) You had $3,100 withheld during the year from your paychecks for state taxes. Will you receive a refund or owe more money at the end of the year? How much?

3) If you make $120,000 per year, …

a. How much do you pay in federal taxes?

b. How much do you pay in state taxes?

c. How much do you pay for social security?

d. How much do you pay for Medicare?

e. How much do you pay yearly for all four income taxes?

f. What percent of your income goes to these taxes?

3a) You had $29,000 withheld during the year from your paychecks for federal taxes. Will you receive a refund or owe more money at the end of the year? How much?

3b) You had $7,500 withheld during the year from your paychecks for state taxes. Will you receive a refund or owe more money at the end of the year? How much?

4) Compare the total percents for the three scenarios. In your opinion should the differences be greater or smaller? Why or Why not?

Day 6 - Deductions

In addition to your federal and state income taxes, your paystub might also have **other deductions** such as union dues or health insurance premiums.

In this lesson, we will be looking at paystubs and calculating how much money and what percent of the paycheck goes to deductions. You will see that your net or take home pay is usually significantly lower than your gross pay.

Note: Make sure you use **Current Amounts and not YTD** (year to date) amounts!
To find the percent rate, divide the deduction by the gross pay and multiply by 100.

1.

John Doe	SS#: 234 12 3423		Period Ending 2/15/02	Check No 118522	
Payments	**Curr Amt**	**YTD Amount**	**Deductions**	**Curr Amt.**	**YTD Amt.**
	1311.71	4055.10	Dental Ins Flx	6.70	13.40
			Soc Security	76.61	241.99
			Federal Tax	156.53	522.51
			Health-Flex	69.34	138.68
			Life Insurance	.54	1.08
			Medicare FICA	17.92	56.60
			State Tax	68.28	219.12
	Deductions	395.92			
	Net Pay	915.79			

Gross Pay: _____

Type of Deduction							
Amount							
Percent Rate							

(Round percents to the *nearest hundredth*.)

Net Pay:_____ Percent Towards Deductions: _____

2.

John Doe	SS#: 234 12 3423		Period Ending 12-11-08	Check No 6055281	
Payments	**Curr Amt**	**YTD Amount**	**Deductions**	**Taxes/Ded**	**YTD Amt.**
Regular Earnings	156.88	1803.90	Federal Tax	8.40	28.96
Overtime	0.00	42.30	Soc Security	9.91	115.83
			Medicare FICA	2.32	27.09
			New York	.26	.40
			Total Deductions	20.89	172.28
			Net Pay	135.99	1673.92

Gross Pay: _____

Type of Deduction				
Amount				
Percent Rate				

(Round percents to the *nearest hundredth*.)

Net Pay:_____ Percent Towards Deductions: _____

3.

John Doe	SS#: 234 12 3423		Period Ending 7/15/08	Check No 30598	
Description	**Curr Amt**	**YTD Amount**	**Hours**	**Reg. Rate**	**Pay Amt.**
Gross Pay	172.50	514.63	15	11.50	172.50
Federal W/H	0.00	12.66			
Soc. Sec.	10.70	31.91			
Medic.	2.50	7.46			
State W/H	1.15	9.30			
Disability	.60	1.20			
Total Deductions	14.95				
Net Pay	157.55				

Gross Pay: _____

Type of Deduction					
Amount					
Percent Rate					

(Round percents to the *nearest hundredth*.)

Net Pay:_____ Percent Towards Deductions: _____

4.

Payments	**Hours / Salary**	**Amount**	**Fisc YTD**	**Deductions**	**Amount**	**YTD Amt.**	**YTD Gross**
.4 Teacher	15,240	725.70	13062.60	FICA	60.49	582.37	9,393.00
Sub Teacher	25	250.00	1250.00	Medicare	14.15	136.21	**YTD Taxable**
Coach	2,058	.00	5058.50	Fed Tax	51.54	496.27	9,115.51
				State Tax	30.37	285.19	**Current Net**
Total		975.00		TRS TR4	29.27	611.66	773.54
				RVF Dues	15.64	265.88	**Per. Ending**
							5/13/05
				Total	201.46	2,377.58	

Gross Pay: _____

Type of Deduction						
Amount						
Percent Rate						

(Round percents to the *nearest hundredth*.)

Net Pay:_____ Percent Towards Deductions: _____

5.

Description	Amount	Current YTD	Fiscal YTD		Amount	Current YTD	Fiscal YTD
Contract					1,500.61	17,990.02	29,925.70
Hourly Pay					0.00	0.00	840.00
Retro					0.00	86.50	86.50
				Totals:	1,500.61	18,076.52	30,852.20
FICA	93.04	1,106.99	1,888.04	Medi	21.76	158.91	441.57
Federal	213.71	2,525.75	4,213.91	State	69.15	819.29	1,340.21
City	0.00	0.00	0.00	S.T.A.	25.50	306.00	510.00
TRS	45.02	542.31	925.59	Health	0.00	222.00	400.00
				Totals:	468.18	5781.25	9719.32

Gross Pay: _____

Type of Deduction								
Amount								
Percent Rate								

(Round percents to the *nearest hundredth*.)

Net Pay:_____ Percent Towards Deductions: _____

Day 7 - The Value of Educational Attainment

Many studies have been done to show that the more education you receive, the more money you will probably make in your lifetime. In this activity, you will look at how much more money you could make by continuing your education.

The following chart shows annual earnings based on a person's educational level.

Year	Overall Median	Less than 9th grade	High school drop-out	High school graduate	Some college	Associates degree	Bachelor's degree	Bachelor's degree or more	Master's degree	Professional degree	Doctoral degree
1991	$40,873	**$17,414**	$23,096	$37,520	$46,296	$52,289	$64,150	**$68,845**	**$72,669**	$102,667	**$92,614**
1993	**$40,324**	$17,450	$22,523	**$35,979**	**$44,153**	**$49,622**	$64,537	$70,349	$75,645	$109,900	$93,712
1995	$42,235	$18,031	**$21,933**	$37,609	$44,537	$50,485	**$63,357**	$69,584	$77,865	**$98,302**	$95,899
1997	$43,648	$17,762	$22,688	$38,607	$45,734	$51,726	$67,487	$72,338	$77,850	$105,409	$99,699
1999	**$46,236**	**$19,008**	$23,977	**$39,322**	**$48,588**	**$54,282**	**$70,925**	**$76,958**	**$82,097**	**$110,383**	**$107,217**
2001	$42,900	$18,830	**$24,162**	$37,468	$47,605	$53,166	$69,796	$75,116	$81,993	$103,918	$96,442
2003	$45,016	$18,787	$22,718	$36,835	$45,854	$56,970	$68,728	$73,446	$78,541	$100,000	$96,830
Average	*$43,376*	*$18,183*	*$23,013*	*$37,620*	*$46,109*	*$51,934*	*$66,997*	*$72,376*	*$78,094*	*$104,368*	*$94,487*

SOURCE: US Census Bureau, 2003[19]

1. Describe the trend of the overall median salaries between 1991 and 2003.

2. How much more did a high school graduate make than a high school drop out in 2003? (write your answer in terms of $ and %)

3. How much more did a college graduate with a bachelor's degree make than a high school graduate in 2003? (write your answer in terms of $ and %)

4. How much more did a college graduate with a master's degree make than a college graduate with a bachelor's degree in 2003? (write your answer in terms of $ and %)

5. Assume you will work for 40 years based on the 2003 amounts.
    a. How much would a high school drop out make over 40 years?

    b. How much would a high school graduate make over 40 years?

    c. How much would a college graduate with a bachelor's degree make over 40 years?

6. Based on the 2003 amounts and your answers to question 5, how much more did a college graduate with a bachelor's degree make over 40 years than a high school graduate? (write your answer in terms of $ and %)

7. Over the 12-year period covered in the chart on the previous page, what is the average amount that the salaries increased each year for a college graduate with a bachelor's degree?

8. If salaries continue to increase by the average amount from question 7, predict how much you would expect to make as a college graduate with a bachelor's degree.

Year you would graduate from 4 years of college _____

Predicted salary after graduating college _____