Math 11 Earning and Spending Money

Book 1: Earning Money

Name: ____________________________

Start Date: ______________ Completion Date: ______________
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</tr>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**Topic Overview**

You may have already entered the workforce and have some knowledge about earning and spending money. The intent of this theme is to help you be aware of financial decision making that you face. In this topic, you will learn about the different ways that you earn money and how you are paid.  

**Suggested Timeframe: ___ Hours**

**Outcomes**

**Overlapping Outcomes**

M11.1 Extend understanding of arithmetic operations to rational numbers to solve problems within the home, money, recreation, and travel themes.

**Theme Specific Outcomes**

M11.8 Demonstrate understanding of income.
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Glossary of Terms

biweekly
every two weeks

graduated commission
employees receive a higher rate of commission as the volume of sales increase

gross pay
total money earned before deductions

income
money received through work or through investments

minimum wage
the lowest hourly, daily or monthly pay that employers may legally pay to workers

piece work
the employee is paid a fixed piece rate for each unit produced or job completed regardless of the time

salary
fixed payment made by an employer at regular intervals

salary or wage plus commission
a fixed amount of money plus commission

straight commission
the employee receives a percentage of the total sales made

time card
a tool to track total time worked in a pay period
Earning and Spending Money

Check What You Know

Vocabulary Check-Up

Do you know the meaning of the following words? Circle all of the words that you know.

- biweekly
- graduated commission
- gross pay
- income
- minimum wage
- piece work
- salary
- salary or wage plus commission
- straight commission
- time card

Pick any 2 of the words that you know already and write down what they mean, in your own words.

1.

2.

Write down all of the words that you don’t know already and find out what they mean. You might ask someone else to tell you, or look them up in the dictionary or on the internet. After doing so, write down what they mean below, in your own words.
Check Your Skills

Ask Your Teacher how many of the following questions you should complete.

Calculate the following. Round your answers to two decimal places when necessary.

1. $11 \times 8 =$
2. $12 \times 6 =$
3. $21 \times 5 =$
4. $4995 \times 12 =$
5. $1007 \times 4 =$
6. $596 \div 5 =$
7. $40455 \div 10 =$
8. $10.50 \times 9 =$
9. $16.25 \times 40 =$
10. $37.75 \times 31 =$

11. $76\,326.47 \div 9 =$
12. $5\,341.72 \div 5 =$

13. Convert each percent to a decimal number
   a) 2% =  
   b) 25% =  
   c) 75% =  
   d) 1.75% =  
   e) 10% =  
   f) 5% =  

14. Write each decimal number as a percent and as a fraction.
   a) 0.4  
   b) 0.35  
   c) 0.01  
   d) 0.015  

15. Calculate
   a) $3\frac{1}{2} + 2 =$  
   b) $6\frac{3}{4} + 1\frac{3}{4} =$  
   c) $8\frac{1}{2} + 2\frac{3}{4} + 5 + 1\frac{1}{2} =$  
   d) $40 - 5\frac{1}{2}$
Ways We Are Paid
The following is a list of ways employees can be paid depending on where they work. The calculations in each of these examples will be gross pay.

If you have entered the workforce, you already know there are different ways you can earn money depending on the job you are doing. Think of as many types of different paying jobs as you can to generate your list, for example: babysitting for the neighbor, delivering papers, selling jewellery through a home based party, or working at a fast food restaurant.

Discuss the Ideas

Do you have a job or a method of earning income? Describe the job and how you are paid.

Gross pay is ________________________________ .

Net pay is ________________________________ .

• Math 10 Essentials BLM 2
• Math 10 Essentials Skills Practice 2
1.1 Hourly Wages

A. Understanding Hourly Wage

- A salary, a wage, or an income is _______________________.
  - In some jobs, pay is calculated by the hour; while other jobs offer an annual income (paid weekly, biweekly, semimonthly or monthly).
- A regular work week usually consists of _________________.
- Minimum wage is _________________________.
  - In Saskatchewan, the minimum wage is _____________.

Discuss the Ideas

1. What are several different types of jobs that fall into each category of pay?

2. Is there an advantage of being paid weekly rather than monthly?

3. If you worked at a job in which you earned an annual salary that was paid monthly, and you worked more than 40 hours in a week, how might you be compensated for your overtime work?
B. Calculating Wages and Hourly Pay

Example 1: Calculating gross pay.

Joe works at the Co-op gas bar and earns $12.50/h. In one week he works 20 hours. How much will he earn in four weeks?

To calculate, multiply hourly wage \( \times \) number of hours worked \( \times \) number of hours per week

\[
\begin{align*}
\text{Gross Pay} &= \text{Hourly Wage} \times \text{Hours Worked} \times \text{Weeks} \\
&= 12.50 \times 20 \times 4 \\
&= 1000
\end{align*}
\]

$1000 is earned in 4 weeks.

Example 2: Calculating hourly pay.

Adam earns $339.25 in 23 hours working at Superstore in the produce section.

To calculate, divide

\[
\begin{align*}
\text{Hourly Wage} &= \frac{\text{Gross Pay}}{\text{Hours Worked}} \\
&= \frac{339.25}{23} \\
&= 14.75
\end{align*}
\]

$14.75/h is Adam’s hourly wage

Try it out…

1. Melissa works at Superstore and earns $13.00/h. In one week she works 32 hours.
   a. How much will she make that week?

   

   \[
   \begin{align*}
   \text{Gross Pay} &= 13 \times 32 \\
   &= 416
   \end{align*}
   \]

   b. How much will she make in 3 weeks if she works the same amount of hours every week?

   

   \[
   \begin{align*}
   \text{Gross Pay} &= 416 \times 3 \\
   &= 1248
   \end{align*}
   \]

2. Alex earns $565.89 working 21 hours at Avalon Auto. How much does he make per hour?

   

   \[
   \begin{align*}
   \text{Hourly Wage} &= \frac{565.89}{21} \\
   &= 27.04
   \end{align*}
   \]
1. Savannah works as an electrician and earns $36.50/hr. If it takes her 25 hours to completely wire a basement, how much will she earn?

2. Logan works at a coffee shop, earning $16.75/hr. He works 5 hours each day. How much will his gross pay be if he works 3 days this week?

3. Patrick works at AIM Electric and makes $48.50/hr. He usually works 40 hours per week.
   a. How much does he make per week?
   b. How much will he make if he works 48 weeks in one year? (Assuming he works 40 hours each week.)

4. Ruila works at McDonald’s, and worked 20 hours last week. Her gross income was $280. What is her hourly wage?
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5. Chad works for a landscaping company and earns $388.80 in 32 hours. What is his hourly wage?

6. Benjamin drives 1A Semi Truck and earns $42/h for long haul trips. Travelling from Saskatoon to Winnipeg took him 10 hours. How much was he paid for the round trip?

7. Destiny works at Sears in the shoe department while attending SIAST. She is paid $13/h. Working around her school schedule, she was able to log the following hours:
   - Monday – 3 hours
   - Tuesday – 3 hours
   - Wednesday – 6 hours
   - Thursday – 6 hours
   - Saturday – 8 hours

   What is her gross income for the week?

8. Aryn is moving out and is going to live with a friend. They have found a basement suite and calculated their expenses. They each need to earn $1250 in 4 weeks. What is the lowest hourly wage she can receive to afford their new accommodations if she will work 40 hours a week?
• Math 10 Essentials p.2-5
• Math 10 Essentials BM1
Anthony is a cashier at Walmart for $10.50/h. His timecard looks like:

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IN</td>
<td>OUT</td>
<td>IN</td>
</tr>
<tr>
<td>Monday</td>
<td>8:30</td>
<td>12:45</td>
<td>3:30</td>
</tr>
<tr>
<td>Tuesday</td>
<td>8:00</td>
<td>10:00</td>
<td>3:00</td>
</tr>
<tr>
<td>Wednesday</td>
<td>9:00</td>
<td>1:00</td>
<td>1:30</td>
</tr>
<tr>
<td>Thursday</td>
<td>2:00</td>
<td>9:00</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>9:30</td>
<td>12:00</td>
<td>1:00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Monday morning shift is 4 h and 15 min. This equals 4 $\frac{3}{4}$ hours. (Some people may think this is 4.15 hours, but it is actually 4.25 hours!)

Monday afternoon shift is 2 h and 30 min. This equals 2 $\frac{1}{2}$ hours.

Monday’s total hours equal: $4 \frac{3}{4} h + 2 \frac{1}{2} h = 6 \frac{3}{4} h$

Tuesday morning shift is 2 h. Tuesday afternoon shift is 2 hours and 30 min. This equals 2 $\frac{1}{2}$ hours.

Tuesday’s total hours equal: $2 h + 2 \frac{1}{2} h = 4 \frac{1}{2} h$

Wednesday morning shift is 4 h. Wednesday afternoon shift is 2 h.

Wednesday’s total hours equal: $4 h + 2 h = 6 h$

Thursday morning shift is 0 h. Thursday afternoon shift is 7 h.

Thursday’s total hours equal: $0 h + 7 h = 7 h$

Friday morning shift is 2 h 30 min. This equals 2 $\frac{3}{4}$ h. Friday afternoon shift is 3 h.

Friday’s total hours equal: $2 \frac{3}{4} h + 3 h = 5 \frac{1}{2} h$

The total number of hours worked by Anthony is equal to:

$6 \frac{3}{4} + 4 \frac{1}{4} + 6 + 7 + 5 \frac{1}{2}$

Anthony finds a common denominator. He knows that this is 4ths, so his number sentence is:

$6 \frac{3}{4} + 4 \frac{3}{4} + 6 + 7 + 5 \frac{3}{4} + = 28 \frac{7}{4}$

$= 29 \frac{3}{4}$

Multiply Anthony’s total hours by his wage to find his gross pay for the week:

$29 \frac{3}{4} or 29.75 \times 10.50 = $312.38$
1.1 C Practice Your Skills: Gross Pay on Time Cards

1. Jackie works at a daycare and earns $12.25 an hour. Calculate her total hours worked and her gross weekly wage based on the following time card.

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IN</td>
<td>OUT</td>
<td>IN</td>
</tr>
<tr>
<td>Monday</td>
<td>8:00</td>
<td>12:00</td>
<td>12:45</td>
</tr>
<tr>
<td>Tuesday</td>
<td>9:00</td>
<td>1:30</td>
<td>2:00</td>
</tr>
<tr>
<td>Wednesday</td>
<td>9:00</td>
<td>1:00</td>
<td>1:30</td>
</tr>
<tr>
<td>Thursday</td>
<td>8:00</td>
<td>2:00</td>
<td>2:30</td>
</tr>
<tr>
<td>Friday</td>
<td>9:00</td>
<td>11:30</td>
<td>1:00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Thomas works in the back shop at a golf course and earns $10.85 an hour. Calculate his total hours worked and his gross weekly wage based on the following time card.

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning</th>
<th>Afternoon</th>
<th>Total Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IN</td>
<td>OUT</td>
<td>IN</td>
</tr>
<tr>
<td>Monday</td>
<td>5:00</td>
<td>10:30</td>
<td>11:15</td>
</tr>
<tr>
<td>Tuesday</td>
<td>5:00</td>
<td>9:45</td>
<td>10:30</td>
</tr>
<tr>
<td>Wednesday</td>
<td>6:00</td>
<td>11:00</td>
<td>11:45</td>
</tr>
<tr>
<td>Thursday</td>
<td>6:00</td>
<td>11:00</td>
<td>11:45</td>
</tr>
<tr>
<td>Friday</td>
<td>5:00</td>
<td>10:15</td>
<td>11:00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
D. Understanding and Calculating Overtime Pay

- Overtime wages are paid for any hours worked over the weekly maximum of ________ hours.
  - If you have to calculate overtime pay you must multiply your hourly wage by time and a half (ex. $1.5 \times \text{wage}$).
  - If you work a stat holiday you are paid double time (ex. $2 \times \text{wage}$).

To find out more, go to: [http://www.workrights.ca/](http://www.workrights.ca/)
Calculating Overtime Example:
Brad works for a welding company and earns $27.35 per hour. This week, he is working 52 hours. How much are his earnings for the week including overtime?

Step 1: Calculate his regular pay for the first 40 hours.
$27.35 \times 40 = $1,094

Step 2: Subtract 40 from the total hours to find the number of overtime hours.
52 - 40 = 12

Step 3: Calculate the overtime wage which is 1.5 x the regular wage.
$27.35 \times 1.5 = $41.03

Step 4: Calculate the overtime pay.
$41.03 \times 12 = $492.36

Step 5: Add together the regular pay and the overtime pay to find his total earnings.
$1,094 + $492.36 = $1,586.36
1. Alison has a job with the city maintenance crew. She is paid an hourly rate of $12.50. She usually works 8 hours a day for 5 days a week.

   a. Find her regular earnings for one week

   b. If Alison works more than 40 hours a week, she is paid overtime for the extra hours. One week Alison worked 5 hours overtime. Find her total earnings for that week.

2. Jodi works 51 hours one week. (Remember that 40 hours is a regular work week) If she makes $25.50/hr., How much will she make that week?

3. You are currently working as an electrician, earning $34.00 per hour, and usually work 50 hours per week (10 of these hours are overtime hours). You are offered a position as supervisor, which earns a salary of $85 000. Should you take the promotion?

4. Dino is paid $9.50 per hour for 40 hours a week. If he works more than 40 hours a week, he is paid time and a half. His friend Len has a different job. Len is paid $9.20 per hour for 37.5 hours a week. If Len works more than 37.5 hours he is paid for overtime as well. If both work 45 hours one week, who is paid more?
1.2 Salary

A. Understanding Salary

- A salary is a fixed payment made by an employer at regular intervals, usually monthly, biweekly, or occasionally weekly.
- Use the chart to list the advantages and disadvantages of receiving weekly or monthly pay.

<table>
<thead>
<tr>
<th>Pay Interval</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Gross Salary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly Gross Salary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. Calculating Salary

An advertisement seeking people to teach English in Japan states the applicant will receive $42,000/yr. Calculate the weekly gross salary and monthly gross salary.

Calculate the weekly gross salary by dividing the yearly salary by 52.

$42,000 ÷ 52 = $807.69

The weekly gross salary is $807.69.

Calculate the monthly gross salary by dividing the yearly salary by 12.

$42,000 ÷ 12 = $3,500

The monthly gross salary is $3,500.
1.2 Practice Your Skills: Calculating Weekly and Monthly Salary

1. Judy has been hired as an accounts manager for a recycling company earning $45 000 per year.
   a. What is her weekly salary?

   b. What is her monthly salary?

2. Greg works as a sales rep for PenBook publishing. His annual salary is $36 700.
   a. What is her weekly salary?

   b. What is her monthly salary?

3. Juan is a mechanic and makes $75 345 per year.
   a. What is her weekly salary?

   b. What is her monthly salary?

4. In 2014, a beginning teacher will earn $52 351 per year. What is that teacher’s monthly salary if they are paid an equal amount over 12 months?
1.3 Commission

A. Understanding Commission

There are a number of different types of commission pay. They are:

- **Straight commission** is when an employee receives a percentage of the total sales made, regardless of how much he/she sold.
- **Graduated commission** is a commission which offers incentive to employees to sell more, because they receive a higher rate of commission as the volume of sales increases.
- **Salary or wage plus commission** is a fixed amount of money plus commission on top of your regular income.

Discuss the Ideas

1. Predict which type of commission you think you would like to receive. Why do you think this type is best? Consider your skills as a salesperson to help you answer this question.

<table>
<thead>
<tr>
<th>Straight Commission</th>
<th>Graduated commission</th>
<th>Salary or wage plus Commission</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**B. Calculating Commission**

Example:

The following 3 examples are referring to Eric, a car salesman who sells 12 cars, making $320,000 in total sales. Look at the calculations for Eric’s earnings based on the following commission types:

**Straight Commission:**

Eric receives 2% commission of his total sales. Calculate his earnings if he sells 12 cars making $320,000 in sales.

Step 1: Convert 2% to a decimal number.

2 ÷ 100 = 0.02

Step 2: Multiply total sales by 0.02

$320,000 \times 0.02 = $6,400.

**Graduated Commission:** Eric receives a percentage of total sales every month. The more he sells, the higher percentage of total sales he is paid.

- For the first $200,000 he is paid 1.5% commission
- Between $200,000 and $300,000 he is paid 1.7% commission
- For any amount over $300,000 he is paid 2% commission

Calculate his earnings if he sells 12 cars making $320,000 in sales.

Step 1: Calculate the amount of commission for the first $200,000.

$200,000 \times 0.015 = $3,000.00

Step 2: Calculate the amount of commission for the sales between $200,000 and $300,000 (Find the amount by subtracting 300,000 – 200,000 = 100,000)

$100,000 \times 0.017 = $1,700.00

cont...
Salary or Wage Plus Commission: Eric receives a salary of $1500 per month as well as 1% commission of his total sales. How much money does he earn by selling 12 cars making $320 000 in sales?

First find the amount he earns in commission.

Step 1: Convert 1% to a decimal number.

\[ \frac{2}{100} = 0.01 \]

Step 2: Multiply total sales by 0.01

\[ $320 000 \times 0.01 = $3 200.00 \]

Find his gross pay by adding commission earnings and salary.

\[ $3 200.00 + $1 500.00 = $4 700.00 \]

Step 3: Calculate the amount of commission for the sales over $300 000 (Find the amount by subtracting 320 000 - 300 000 = 20 000)

\[ 20 000 \times 0.02 = $400.00 \]

Step 4: Add all the commissions together to find the total gross earnings for the month:

\[ $3 000.00 + $1 700.00 + $400.00 = $5 100.00 \]

- Math 10 Essentials BLM 4-6
- Math 10 Essentials p. 8-9
Discuss the Ideas

1. What happens to Eric’s earnings on straight commission if he only sells 3 cars, at a total of $95 000?

2. Reflect on the different calculations of Eric’s earnings. Does this change the type of commission that you think you would like to be paid at? Explain your answer.

3. What types of things did you consider in your answer?
1.2 B Practice Your Skills: Calculating Commission

Ask your teacher how many of the following questions you should complete. For each question, identify:
- type of commission
- total earnings

1. Susan works at a shoe store and earns a salary of $350 a week plus 8% commission. One week she sold $3500 worth of shoes. Find her total earnings for the week.

2. Jon works part time at the Al Andersons selling hockey skates. He is paid 30% of his sales. His sales for each work day of one week are given. Calculate her earnings for the week.

<table>
<thead>
<tr>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>$87</td>
<td>$150</td>
<td>$200</td>
<td>$300</td>
<td>$175</td>
</tr>
</tbody>
</table>

3. Stuart receives a monthly salary of $750 and 4% commission on his total sales. For one month, he sold $25,000. Calculate his total earnings for the month.
4. Fill in the blanks for the following table: Each employee makes 25% from their sales for the week

<table>
<thead>
<tr>
<th>Name</th>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thurs</th>
<th>Fri</th>
<th>Total Sales</th>
<th>Total Earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beth</td>
<td>424</td>
<td>123</td>
<td>350</td>
<td>200</td>
<td>175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Susie</td>
<td>100</td>
<td>150</td>
<td>230</td>
<td>200</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pete</td>
<td>200</td>
<td>236</td>
<td>350</td>
<td>300</td>
<td>100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frank</td>
<td>90</td>
<td>140</td>
<td>500</td>
<td>200</td>
<td>90</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rob</td>
<td>100</td>
<td>120</td>
<td>150</td>
<td>140</td>
<td>170</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Stacey sells magazines subscriptions by telephone. She is paid $256 a week and receives a commission for each subscription she sells. In one week she sold the subscriptions below. Fill in the blanks on the following table and find Stacey’s total earnings for the week.

<table>
<thead>
<tr>
<th>Magazine</th>
<th>Price</th>
<th>Number</th>
<th>Total Sales</th>
<th>Commission Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>SHE</td>
<td>$35</td>
<td>10</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Fitness</td>
<td>$35.75</td>
<td>15</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>Muscle and Fitness</td>
<td>$42.50</td>
<td>12</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Glamour</td>
<td>$45.75</td>
<td>9</td>
<td></td>
<td>5</td>
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</tbody>
</table>

Total earnings:

6. Russell is a computer retailer. He receives 4% commission on sales up to $8000, for sales between $8000 and $15000 the rate is 6%, for sales over $15000 he receives 8% on the amount over the $15000. If in December, Russ sold $33 500 worth of goods, calculate his total earnings:

<table>
<thead>
<tr>
<th>On the first $8000 – 4%</th>
<th>On the next $7000 (Between $8000 and $15000) – 6%</th>
<th>On anything over $15000 – 8%</th>
</tr>
</thead>
</table>
7. Susan sells cars for a job. In the month of September, her total sales was $120,000. If she makes 3% of her sales, how much did she earn for the month of September?

8. Jon makes a regular salary of $1450 a month as a sport store salesman. If he makes a bonus of 5% on his sales to motivate him to sell to the customers, how much extra would he make if he sells a total of $1250 for the month? What would his monthly salary be?

9. Which would be a better salary choice for Jennifer: straight commission for a job that her sales were $45631 at 4% OR a salary of $1789/month plus 2% commission of her sales? Why?
10. Janet sells clothing for a women’s store. She makes 15% straight commission on sales from 0-$5000. Anything over this in sales, she makes 25%. Determine how much she would make if her total sales for the month of March was $6 175.

11. John sells cars. He makes 5% commission on sales up to $60 000. For sales between $60 000 and $75 000 he makes 7% and for any sales above $75 000 he makes 9%. How much did John earn if his sales for the month totaled $85 625?
1.4 Piece Work

A. Understanding Piece Work

- Piece work is when you are paid for the amount of work you have done and not for the number of hours it has taken you to complete a task.

- Examples include:
  - tree planters
  - servers - tips can be considered piece work because it depends on the number of tables you have served

- Piece work is paid by quantity (number) of items completed or produced. Some options are:
  - paid on the number of items made
    - i.e. necklaces, bird houses, cakes, etc.
  - paid by the number of items picked
    - i.e. basket of strawberries, basket of apples, etc.
  - paid by the number of items sold,
    - i.e. magazines, programs, tickets, etc. sold.

- Sometimes piece work is also based on experience – if you are better at picking fruit, you might be paid more than inexperienced employee.

Discuss the Ideas
Use the chart to list the advantages and disadvantages of receiving pay by piecework.

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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<tbody>
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</table>
Example: Anne-Marie works part time at a large sports facility selling programs. She is paid by piecework. She earns $10 per game plus $1 for every program she sells. Find Anne-Marie’s total earnings when she sells 93 programs at one game.

- How much does she make for just showing up? $10
- How much does she make for each program that she sells? $1
- How many programs did she sell? 93
- Therefore how much money did she make from just selling programs? $93 \times $1 = $93
- What is her total for the night, showing up (____$$) and selling programs (____$$$)$? $10 + $93 = $103
1.4 Practice Your Skills: Piece Work

Ask your teacher how many of the following questions you should complete.

1. Mark works at a rock concert selling programs. He is paid $15 for showing up, plus 20 cents for each program that he sells. He sells 150 programs. How much does he earn working at the rock concert?

2. Orchards employ workers to prune trees. They pay the workers from $2 to $3 per tree for this service.
   a. During Sean’s first week of work, he prunes 150 trees at $2 per tree. What are his earnings for the week?
   b. Susan is experienced at pruning trees. She prunes 300 trees at $2.50 per tree in one week. What are her earnings for the week?

3. Why might the rate given in question 2 range from $2 to $3 per tree?
4. Why do you think that some orchards often hesitate to pay fruit pickers by the piece work?

5. Worm pickers are paid from $20 to $30 for every 1000 worms that they pick. The rate varies from evening to evening. One evening Paige is paid $28 for every 1000 worms that she picks. She picks 5000 worms. What did she make that evening?

6. How does piece work benefit the worker or the employer?
# Student Evaluation

<table>
<thead>
<tr>
<th>Insufficient Evidence (IE)</th>
<th>Developing (D)</th>
<th>Growing (G)</th>
<th>Proficient (P)</th>
<th>Exceptional (E)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student has not demonstrated the criteria below.</td>
<td>Student has rarely demonstrated the criteria below.</td>
<td>Student has inconsistently demonstrated the criteria below.</td>
<td>Student has consistently demonstrated the criteria below.</td>
<td>Student has consistently demonstrated the criteria below. In addition they have shown their understanding in novel situations or at a higher level of thinking than what is expected by the criteria.</td>
</tr>
</tbody>
</table>

## Proficient Level Criteria

### M11.1 Extend understanding of arithmetic operations to rational numbers to solve problems within the home, money, recreation, and travel themes.

- I can use whole numbers, integers, fractions, decimals, and percents.
- I can compare and convert among fractions, decimals and percents.
- I can round decimals.
- I understand percents.
- I can determine if my answer is reasonable.

### M11.8 \[WA 10.11\] Demonstrate understanding of income.

- I understand there are different ways of being paid.
- I have discovered jobs that use different ways of being paid.
- I can describe the advantages and disadvantages of ways of being paid.
- I can solve problems involving work schedules and payment methods.
- I can analyze and complete timesheets.
- I can explain and assess the information provided on pay stubs.
- I can determine gross pay for additional income situations (ie. tips, overtime, commission, piecework, etc.)
- I can compare and evaluate different ways of earning income given situations. (ie. Pay for working part time vs full time).
# Learning Log

<table>
<thead>
<tr>
<th>Date</th>
<th>Starting Point</th>
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