Lesson 10: Simple Interest

Student Outcomes

- Students solve simple interest problems using the formula $I = Prt$, where $I =$ interest, $P =$ principal, $r =$ interest rate, and $t =$ time.
- When using the formula $I = Prt$, students recognize that units for both interest rate and time must be compatible; students convert the units when necessary.

Classwork

Fluency Exercise (10 minutes): Fractional Percents

Students complete a two-round Sprint provided at the end of this lesson (Fractional Percents) to practice finding the percent, including fractional percents, of a number. Provide one minute for each round of the Sprint. Refer to the Sprints and Sprint Delivery Script sections in the Module Overview for directions to administer a Sprint. Be sure to provide any answers not completed by the students. Sprints and answer keys are provided at the end of the lesson.

Example 1 (7 minutes): Can Money Grow? A Look at Simple Interest

MP.1

Students solve a simple interest problem to find the new balance of a savings account that earns interest. Students model the interest earned over time (in years) by constructing a table and graph to show that a proportional relationship exists between t, number of years, and I, interest.

Scaffolding:
- Allow one calculator per group (or student) to aid with discovering the mathematical pattern from the table.
- Also, consider using a simpler percent value, such as 2%.

Begin class discussion by displaying and reading the following problem to the whole class. Allow students time to process the information presented. Small group discussion should be encouraged before soliciting individual feedback.

- Larry invests $\$100$ in a savings plan. The plan pays $4\frac{1}{2}\%$ interest each year on his $\$100$ account balance. The following chart shows the balance on his account after each year for the next 5 years. He did not make any deposits or withdrawals during this time.

Time (in years)	Balance (in dollars)
1	104.50
2	109.00
3	113.50
4	118.00
5	122.50

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Possible discussion questions:

- What is simple interest?
- How is it calculated?
- What pattern(s) do you notice from the table?
- Can you create a formula to represent the pattern(s) from the table?

Display the interest formula to the class, and explain each variable.

To find the simple interest, use:

$$\text{Interest} = \text{Principal} \times \text{Rate} \times \text{Time}$$

$$I = P \times r \times t$$

$$I = Prt$$

- **r is the percent of the principal that is paid over a period of time (usually per year).**
- **t is the time.**
- **r and t must be compatible. For example, if r is an annual interst rate, then t must be written in years.**

Model for the class how to substitute the given information into the interest formula to find the amount of interest earned.

Example 1: Can Money Grow? A Look at Simple Interest

Larry invests $\$100$ in a savings plan. The plan pays $4\frac{1}{2}\%$ interest each year on his $\$100$ account balance.

a. How much money will Larry earn in interest after 3 years? After 5 years?

3 years:

$$I = Prt$$
$$I = 100\,(0.045)(3)$$
$$I = 13.50$$

Larry will earn $\$13.50$ in interest after 3 years.

5 years:

$$I = Prt$$
$$I = 100\,(0.045)(5)$$
$$I = 22.50$$

Larry will earn $\$22.50$ in interest after 5 years.

b. How can you find the balance of Larry's account at the end of 5 years?

You would add the interest earned after 5 years to the beginning balance. $\$22.50 + \$100 = \$122.50$.

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Show the class that the relationship between the amount of interest earned each year can be represented in a table or graph by posing the question, "The interest earned can be found using an equation. How else can we represent the amount of interest earned other than an equation?"

- Draw a table, and call on students to help you complete the table. Start with finding the amount of interest earned after 1 year.

t (in years)	I (interest earned after t years, in dollars)
1	$I = (100)(0.045)(1) = 4.50$
2	$I = (100)(0.045)(2) = 9.00$
3	$I = (100)(0.045)(3) = 13.50$
4	$I = (100)(0.045)(4) = 18.00$
5	$I = (100)(0.045)(5) = 22.50$

Increase of $\$4.50$
Increase of $\$4.50$
Increase of $\$4.50$
Increase of $\$4.50$

The amount of interest earned increases by the same amount each year, $\$4.50$. Therefore, the ratios in the table are equivalent. This means that the relationship between time and the interest earned is proportional.

Possible discussion questions:

- Using your calculator, what do you observe when you divide the I by t for each year?
  - *The ratio is* 4.5.
- What is the constant of proportionality in this situation? What does it mean? What evidence from the table supports your answer?
  - *The constant of proportionality is* 4.5. *This is the principal times the interest rate because* $(100)(0.045) = 4.5$. *This means that for every year, the interest earned on the savings account will increase by* $\$4.50$. *The table shows that the principal and interest rate are not changing; they are constant.*
- What other representation could we use to show the relationship between time and the amount of interest earned is proportional?
  - *We could use a graph.*

Display to the class a graph of the relationship.

- What are some characteristics of the graph?
  - *It has a title.*
  - *The axes are labeled.*
  - *The scale for the* x*-axis is* 1 *year.*
  - *The scale for the* y*-axis is* 5 *dollars.*
- By looking at the graph of the line, can you draw a conclusion about the relationship between time and the amount of interest earned?
  - *All pairs from the table are plotted, and a straight line passes through those points and the origin. This means that the relationship is proportional.*

Scaffolding:

Use questioning strategies to review graphing data in the coordinate plane for all learners. Emphasize the importance of an accurate scale and making sure variables are graphed along the correct axes.

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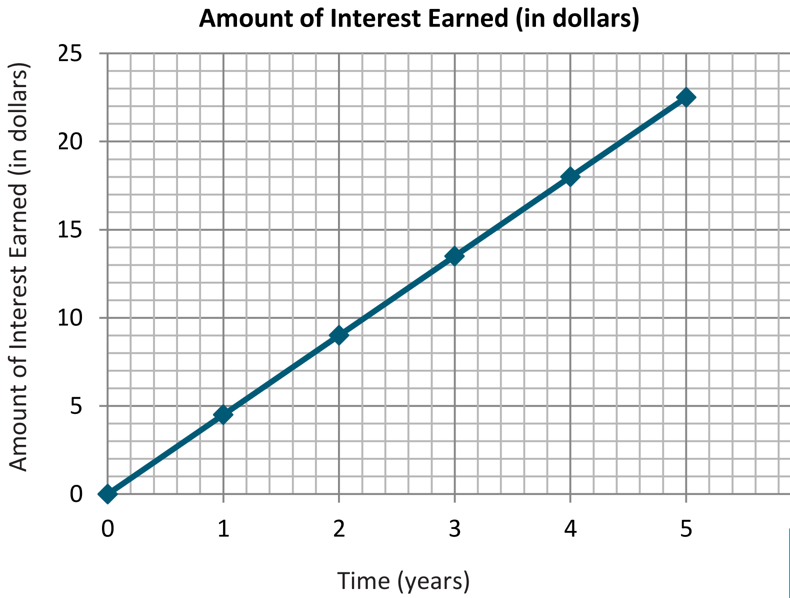

- What does the point $(4, 18)$ mean in terms of the situation?
  - *It means that at the end of four years, Larry would have earned* $\$18$ *in interest.*
- What does the point $(0, 0)$ mean?
  - *It means that when Larry opens the account, no interest is earned.*
- What does the point $(1, 4.50)$ mean?
  - *It means that at the end of the first year, Larry's account earned* $\$4.50$. 4.5 *is also the constant of proportionality.*
- What equation would represent the amount of interest earned at the end of a given year in this situation?
  - $I = 4.5t$

> *Scaffolding:*
> - Provide a numbered coordinate plane to help build confidence for students who struggle with creating graphs by hand.
> - If time permits, allow advanced learners to practice graphing the interest formula using the $y =$ *editor* in a graphing calculator and scrolling the table to see how much interest is earned for x number of years.

Exercise 1 (3 minutes)

Students will practice using the interest formula independently, with or without technology. Review answers as a whole class.

> **Exercise 1**
>
> **Find the balance of a savings account at the end of 10 years if the interest earned each year is 7.5%. The principal is $\$500$.**
>
> $$I = Prt$$
> $$I = \$500(0.075)(10)$$
> $$I = \$375$$
>
> *The interest earned after* 10 *years is* $\$375$. *So, the balance at the end of* 10 *years is* $\$375 + \$500 = \$875$.

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Example 2 (5 minutes): Time Other Than One Year

MP.1

In this example, students learn to recognize that units for both the interest rate and time must be compatible. If not, they must convert the units when necessary.

Remind the class how to perform a unit conversion from months to years. Because 1 year $=$ 12 months, the number of months given can be divided by 12 to get the equivalent year.

> *Scaffolding:*
>
> Provide a poster with the terms *semi*, *quarterly*, and *annual*. Write an example next to each word, showing an example of a conversion.

Example 2: Time Other Than One Year

A $\$1,000$ savings bond earns simple interest at the rate of 3% each year. The interest is paid at the end of every month. How much interest will the bond have earned after 3 months?

Step 1: Convert 3 months to a year.

12 months $= 1$ year. So, divide both sides by 4 to get 3 months $= \frac{1}{4}$ year.

Step 2: Use the interest formula to find the answer.

$$I = Prt$$
$$I = (\$1000)(0.03)(0.25)$$
$$I = \$7.50$$

The interest earned after 3 months is $\$7.50$.

Example 3 (5 minutes): Solving for P, r, or t

Students practice working backward to find the interest rate, principal, or time by dividing the interest earned by the product of the other two values given.

The teacher could have students annotate the word problem by writing the corresponding variable above each given quantity. Have students look for keywords to identify the appropriate variable. For example, the words *investment*, *deposit*, and *loan* refer to principal. Students will notice that time is not given; therefore, they must solve for t.

Example 3: Solving for P, r, or t

Mrs. Williams wants to know how long it will take an investment of $\overset{P}{\$450}$ to earn $\overset{I}{\$200}$ in interest if the yearly interest rate is $\underset{r}{6.5\%}$, paid at the end of each year.

$$I = Prt$$
$$\$200 = (\$450)(0.065)t$$
$$\$200 = \$29.25t$$
$$\$200\left(\frac{1}{\$29.25}\right) = \left(\frac{1}{\$29.25}\right)\$29.25t$$
$$6.8376 = t$$

Six years is not enough time to earn $\$200$. At the end of seven years, the interest will be over $\$200$. It will take seven years since the interest is paid at the end of each year.

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Exercises 2–3 (7 minutes)

Students complete the following exercises independently, or in groups of two, using the simple interest formula.

Exercise 2

Write an equation to find the amount of simple interest, A, earned on a $\$600$ investment after $1\frac{1}{2}$ years if the semi-annual (6-month) interest rate is 2%.

$1\frac{1}{2}$ years is the same as

6 months	*6 months*	*6 months*

$\text{Interest} = \text{Principal} \times \text{Rate} \times \text{Time}$

$A = 600(0.02)(3)$ — *1.5 years is 1 year and 6 months, so $t = 3$.*

$A = 36$ — *The amount of interest earned is $\$36$.*

Exercise 3

A $\$1,500$ loan has an annual interest rate of $4\frac{1}{4}\%$ on the amount borrowed. How much time has elapsed if the interest is now $\$127.50$?

$\text{Interest} = \text{Principal} \times \text{Rate} \times \text{Time}$

Let t be time in years.

$$127.50 = (1,500)(0.0425)t$$
$$127.50 = 63.75t$$
$$(127.50)\left(\frac{1}{63.75}\right) = \left(\frac{1}{63.75}\right)(63.75)t$$
$$2 = t$$

Two years have elapsed.

Closing (2 minutes)

- Explain each variable of the simple interest formula.
  - *I is the amount of interest earned or owed.*
  - *P is the principal, or the amount invested or borrowed.*
  - *r is the interest rate for a given time period (yearly, quarterly, monthly).*
  - *t is time.*
- What would be the value of the time for a two-year period for a quarterly interest rate? Explain.
  - *t would be written as 8 because a quarter means every 3 months, and there are four quarters in one year. So, $2 \times 4 = 8$.*

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Lesson Summary

- Interest earned over time can be represented by a proportional relationship between time, in years, and interest.
- The simple interest formula is

$$\text{Interest} = \text{Principal} \times \text{Rate} \times \text{Time}$$
$$I = P \times r \times t$$
$$I = Prt$$

r is the percent of the principal that is paid over a period of time (usually per year)

t is the time

- The rate, r, and time, t, must be compatible. If r is the annual interest rate, then t must be written in years.

Exit Ticket (6 minutes)

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Name ______________________________ Date ______________

Lesson 10: Simple Interest

Exit Ticket

1. Erica's parents gave her $\$500$ for her high school graduation. She put the money into a savings account that earned 7.5% annual interest. She left the money in the account for nine months before she withdrew it. How much interest did the account earn if interest is paid monthly?

2. If she would have left the money in the account for another nine months before withdrawing, how much interest would the account have earned?

3. About how many years and months would she have to leave the money in the account if she wants to reach her goal of saving $\$750$?

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Exit Ticket Sample Solutions

1. Erica's parents gave her $\$500$ for her high school graduation. She put the money into a savings account that earned 7.5% annual interest. She left the money in the account for nine months before she withdrew it. How much interest did the account earn if interest is paid monthly?

$$I = Prt$$
$$I = (500)(0.075)\left(\frac{9}{12}\right)$$
$$I = 28.125$$

The interest earned is $\$28.13$.

2. If she would have left the money in the account for another nine months before withdrawing, how much interest would the account have earned?

$$I = Prt$$
$$I = (500)(0.075)\left(\frac{18}{12}\right)$$
$$I = 56.25$$

The account would have earned $\$56.25$.

3. About how many years and months would she have to leave the money in the account if she wants to reach her goal of saving $\$750$?

$750 - 500 = 250$ *She would need to earn $\$250$ in interest.*

$$I = Prt$$
$$250 = (500)(0.075)t$$
$$250 = 37.5t$$
$$250\left(\frac{1}{37.5}\right) = \left(\frac{1}{37.5}\right)(37.5)t$$
$$6\frac{2}{3} = t$$

It would take her 6 years and 8 months to reach her goal because $\frac{2}{3} \times 12$ months is 8 months.

Problem Set Sample Solutions

1. Enrique takes out a student loan to pay for his college tuition this year. Find the interest on the loan if he borrowed $\$2,500$ at an annual interest rate of 6% for 15 years.

$I = 2,500(0.06)(15)$

$I = 2,250$

Enrique would have to pay $\$2,250$ in interest.

2. Your family plans to start a small business in your neighborhood. Your father borrows $\$10,000$ from the bank at an annual interest rate of 8% rate for 36 months. What is the amount of interest he will pay on this loan?

$I = 10,000(0.08)(3)$

$I = 2,400$

He will pay $\$2,400$ in interest.

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3. **Mr. Rodriguez invests $\$2,000$ in a savings plan. The savings account pays an annual interest rate of 5.75% on the amount he put in at the end of each year.**

a. **How much will Mr. Rodriguez earn if he leaves his money in the savings plan for 10 years?**

$I = 2,000(0.0575)(10)$

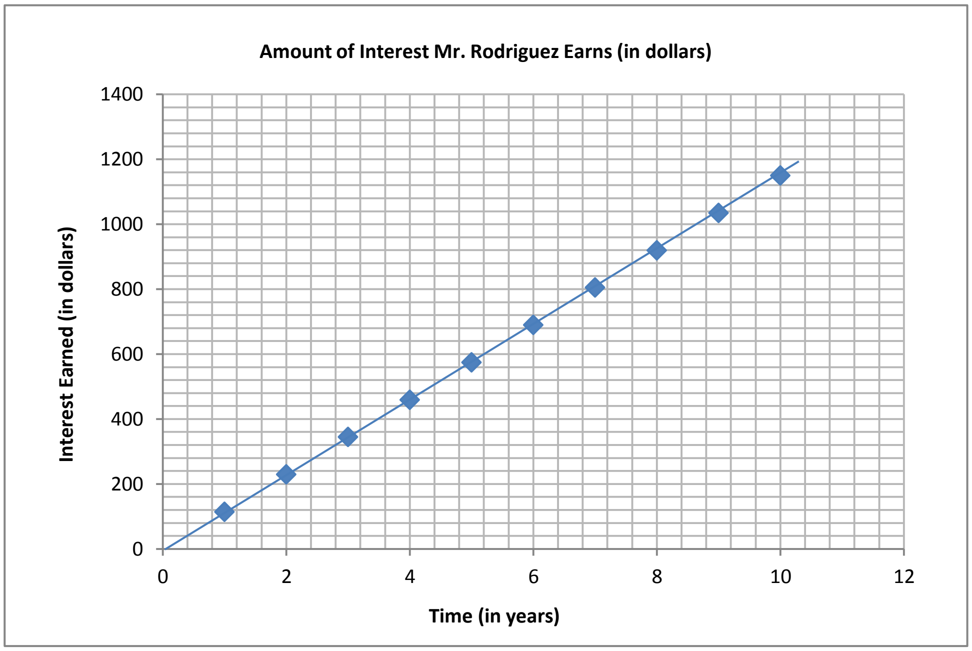
$I = 1,150$

He will earn $\$1,150$.

b. **How much money will be in his savings plan at the end of 10 years?**

At the end of 10 years, he will have $\$3,150$ because $\$2,000 + \$1,150 = \$3,150$.

c. **Create (and label) a graph in the coordinate plane to show the relationship between time and the amount of interest earned for 10 years. Is the relationship proportional? Why or why not? If so, what is the constant of proportionality?**



Yes, the relationship is proportional because the graph shows a straight line touching the origin. The constant of proportionality is 115 because the amount of interest earned increases by $\$115$ for every one year.

d. **Explain what the points $(0, 0)$ and $(1, 115)$ mean on the graph.**

$(0, 0)$ means that no time has elapsed and no interest has been earned.

$(1, 115)$ means that after 1 year, the savings plan would have earned $\$115$. 115 is also the constant of proportionality.

e. **Using the graph, find the balance of the savings plan at the end of seven years.**

From the table, the point $(7, 805)$ means that the balance would be $\$2,000 + \$805 = \$2,805$.

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f. After how many years will Mr. Rodriguez have increased his original investment by more than 50%? Show your work to support your answer.

$\text{Quantity} = \text{Percent} \times \text{Whole}$

Let Q be the account balance that is 50% more than the original investment.

$$Q > (1 + 0.50)(2,000)$$
$$Q > 3,000$$

The balance will be greater than $\$3,000$ beginning between 8 and 9 years because the graph shows $(8, 920)$ and $(9, 1035)$, so $\$2,000 + \$920 = \$2,920 < \$3,000$, and $\$2,000 + \$1,035 = \$3,035 > \$3,000$.

Challenge Problem:

4. George went on a game show and won $\$60,000$. He wanted to invest it and found two funds that he liked. Fund 250 earns 15% interest annually, and Fund 100 earns 8% interest annually. George does not want to earn more than $\$7,500$ in interest income this year. He made the table below to show how he could invest the money.

	I	P	r	t
Fund 100	$0.08x$	x	0.08	1
Fund 250	$0.15(60000 - x)$	$60,000 - x$	0.15	1
Total	$7,500$	$60,000$		

a. Explain what value x is in this situation.

x is the principal, in dollars, that George could invest in Fund 100.

b. Explain what the expression $60,000 - x$ represents in this situation.

$60,000 - x$ is the principal, in dollars, that George could invest in Fund 250. It is the money he would have left over once he invests in Fund 100.

c. Using the simple interest formula, complete the table for the amount of interest earned.

See table above.

d. Write an equation to show the total amount of interest earned from both funds.

$0.08x + 0.15(60,000 - x) \leq 7,500$

e. Use algebraic properties to solve for x and the principal, in dollars, George could invest in Fund 100. Show your work.

$$0.08x + 9,000 - 0.15x \leq 7,500$$
$$9,000 - 0.07x \leq 7,500$$
$$9,000 - 9,000 - 0.07x \leq 7,500 - 9,000$$
$$-0.07x \leq -1,500$$
$$\left(\frac{1}{-0.07}\right)(-0.07x) \leq \left(\frac{1}{-0.07}\right)(-1,500)$$
$$x \approx 21,428.57$$

x approximately equals $\$21,428.57$. George could invest $\$21,428.57$ in Fund 100.

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f. **Use your answer from part (e) to determine how much George could invest in Fund 250.**

He could invest $\$38,571.43$ *in Fund 250 because* $60,000 - 21,428.57 = 38,571.43$.

g. **Using your answers to parts (e) and (f), how much interest would George earn from each fund?**

Fund 100: $0.08 \times 21,428.57 \times 1$ *approximately equals* $\$1,714.29$.

Fund 250: $0.15 \times 38,571.43 \times 1$ *approximately equals* $\$5,785.71$ *or* $7,500 - 1,714.29$.

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Fractional Percents—Round 1

Number Correct: ______

Directions: Find the part that corresponds with each percent.

1.	1% of 100		23.	$\frac{1}{4}$% of 100	
2.	1% of 200		24.	$\frac{1}{4}$% of 200	
3.	1% of 400		25.	$\frac{1}{4}$% of 400	
4.	1% of 800		26.	$\frac{1}{4}$% of 800	
5.	1% of 1,600		27.	$\frac{1}{4}$% of 1,600	
6.	1% of 3,200		28.	$\frac{1}{4}$% of 3,200	
7.	1% of 5,000		29.	$\frac{1}{4}$% of 5,000	
8.	1% of 10,000		30.	$\frac{1}{4}$% of 10,000	
9.	1% of 20,000		31.	$\frac{1}{4}$% of 20,000	
10.	1% of 40,000		32.	$\frac{1}{4}$% of 40,000	
11.	1% of 80,000		33.	$\frac{1}{4}$% of 80,000	
12.	$\frac{1}{2}$% of 100		34.	1% of 1,000	
13.	$\frac{1}{2}$% of 200		35.	$\frac{1}{2}$% of 1,000	
14.	$\frac{1}{2}$% of 400		36.	$\frac{1}{4}$% of 1,000	
15.	$\frac{1}{2}$% of 800		37.	1% of 4,000	
16.	$\frac{1}{2}$% of 1,600		38.	$\frac{1}{2}$% of 4,000	
17.	$\frac{1}{2}$% of 3,200		39.	$\frac{1}{4}$% of 4,000	
18.	$\frac{1}{2}$% of 5,000		40.	1% of 2,000	
19.	$\frac{1}{2}$% of 10,000		41.	$\frac{1}{2}$% of 2,000	
20.	$\frac{1}{2}$% of 20,000		42.	$\frac{1}{4}$% of 2,000	
21.	$\frac{1}{2}$% of 40,000		43.	$\frac{1}{2}$% of 6,000	
22.	$\frac{1}{2}$% of 80,000		44.	$\frac{1}{4}$% of 6,000	

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Fractional Percents—Round 1 [KEY]

Directions: Find the part that corresponds with each percent.

1.	1% of 100	**1**
2.	1% of 200	**2**
3.	1% of 400	**4**
4.	1% of 800	**8**
5.	1% of 1,600	**16**
6.	1% of 3,200	**32**
7.	1% of 5,000	**50**
8.	1% of 10,000	**100**
9.	1% of 20,000	**200**
10.	1% of 40,000	**400**
11.	1% of 80,000	**800**
12.	$\frac{1}{2}$% of 100	$\mathbf{\frac{1}{2}}$
13.	$\frac{1}{2}$% of 200	**1**
14.	$\frac{1}{2}$% of 400	**2**
15.	$\frac{1}{2}$% of 800	**4**
16.	$\frac{1}{2}$% of 1,600	**8**
17.	$\frac{1}{2}$% of 3,200	**16**
18.	$\frac{1}{2}$% of 5,000	**25**
19.	$\frac{1}{2}$% of 10,000	**50**
20.	$\frac{1}{2}$% of 20,000	**100**
21.	$\frac{1}{2}$% of 40,000	**200**
22.	$\frac{1}{2}$% of 80,000	**400**

23.	$\frac{1}{4}$% of 100	$\mathbf{\frac{1}{4}}$
24.	$\frac{1}{4}$% of 200	$\mathbf{\frac{1}{2}}$
25.	$\frac{1}{4}$% of 400	**1**
26.	$\frac{1}{4}$% of 800	**2**
27.	$\frac{1}{4}$% of 1,600	**4**
28.	$\frac{1}{4}$% of 3,200	**8**
29.	$\frac{1}{4}$% of 5,000	$\mathbf{12\frac{1}{2}}$
30.	$\frac{1}{4}$% of 10,000	**25**
31.	$\frac{1}{4}$% of 20,000	**50**
32.	$\frac{1}{4}$% of 40,000	**100**
33.	$\frac{1}{4}$% of 80,000	**200**
34.	1% of 1,000	**10**
35.	$\frac{1}{2}$% of 1,000	**5**
36.	$\frac{1}{4}$% of 1,000	**2.5**
37.	1% of 4,000	**40**
38.	$\frac{1}{2}$% of 4,000	**20**
39.	$\frac{1}{4}$% of 4,000	**10**
40.	1% of 2,000	**20**
41.	$\frac{1}{2}$% of 2,000	**10**
42.	$\frac{1}{4}$% of 2,000	**5**
43.	$\frac{1}{2}$% of 6,000	**30**
44.	$\frac{1}{4}$% of 6,000	**15**

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Fractional Percents—Round 2

Number Correct: ______

Improvement: ______

Directions: Find the part that corresponds with each percent.

1.	10% of 30		23.	$10\frac{1}{2}\%$ of 100	
2.	10% of 60		24.	$10\frac{1}{2}\%$ of 200	
3.	10% of 90		25.	$10\frac{1}{2}\%$ of 400	
4.	10% of 120		26.	$10\frac{1}{2}\%$ of 800	
5.	10% of 150		27.	$10\frac{1}{2}\%$ of 1,600	
6.	10% of 180		28.	$10\frac{1}{2}\%$ of 3,200	
7.	10% of 210		29.	$10\frac{1}{2}\%$ of 6,400	
8.	20% of 30		30.	$10\frac{1}{4}\%$ of 400	
9.	20% of 60		31.	$10\frac{1}{4}\%$ of 800	
10.	20% of 90		32.	$10\frac{1}{4}\%$ of 1,600	
11.	20% of 120		33.	$10\frac{1}{4}\%$ of 3,200	
12.	5% of 50		34.	10% of 1,000	
13.	5% of 100		35.	$10\frac{1}{2}\%$ of 1,000	
14.	5% of 200		36.	$10\frac{1}{4}\%$ of 1,000	
15.	5% of 400		37.	10% of 2,000	
16.	5% of 800		38.	$10\frac{1}{2}\%$ of 2,000	
17.	5% of 1,600		39.	$10\frac{1}{4}\%$ of 2,000	
18.	5% of 3,200		40.	10% of 4,000	
19.	5% of 6,400		41.	$10\frac{1}{2}\%$ of 4,000	
20.	5% of 600		42.	$10\frac{1}{4}\%$ of 4,000	
21.	10% of 600		43.	10% of 5,000	
22.	20% of 600		44.	$10\frac{1}{2}\%$ of 5,000	

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Fractional Percents—Round 2 [KEY]

Directions: Find the part that corresponds with each percent.

1.	10% of 30	**3**
2.	10% of 60	**6**
3.	10% of 90	**9**
4.	10% of 120	**12**
5.	10% of 150	**15**
6.	10% of 180	**18**
7.	10% of 210	**21**
8.	20% of 30	**6**
9.	20% of 60	**12**
10.	20% of 90	**18**
11.	20% of 120	**24**
12.	5% of 50	**2.5**
13.	5% of 100	**5**
14.	5% of 200	**10**
15.	5% of 400	**20**
16.	5% of 800	**40**
17.	5% of 1,600	**80**
18.	5% of 3,200	**160**
19.	5% of 6,400	**320**
20.	5% of 600	**30**
21.	10% of 600	**60**
22.	20% of 600	**120**

23.	$10\frac{1}{2}\%$ of 100	**10.5**
24.	$10\frac{1}{2}\%$ of 200	**21**
25.	$10\frac{1}{2}\%$ of 400	**42**
26.	$10\frac{1}{2}\%$ of 800	**84**
27.	$10\frac{1}{2}\%$ of 1,600	**168**
28.	$10\frac{1}{2}\%$ of 3,200	**336**
29.	$10\frac{1}{2}\%$ of 6,400	**672**
30.	$10\frac{1}{4}\%$ of 400	**41**
31.	$10\frac{1}{4}\%$ of 800	**82**
32.	$10\frac{1}{4}\%$ of 1,600	**164**
33.	$10\frac{1}{4}\%$ of 3,200	**328**
34.	10% of 1,000	**100**
35.	$10\frac{1}{2}\%$ of 1,000	**105**
36.	$10\frac{1}{4}\%$ of 1,000	**102.5**
37.	10% of 2,000	**200**
38.	$10\frac{1}{2}\%$ of 2,000	**210**
39.	$10\frac{1}{4}\%$ of 2,000	**205**
40.	10% of 4,000	**400**
41.	$10\frac{1}{2}\%$ of 4,000	**420**
42.	$10\frac{1}{4}\%$ of 4,000	**410**
43.	10% of 5,000	**500**
44.	$10\frac{1}{2}\%$ of 5,000	**525**

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