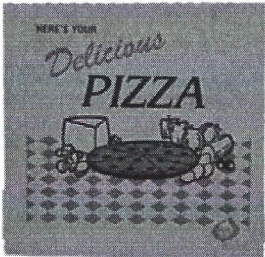
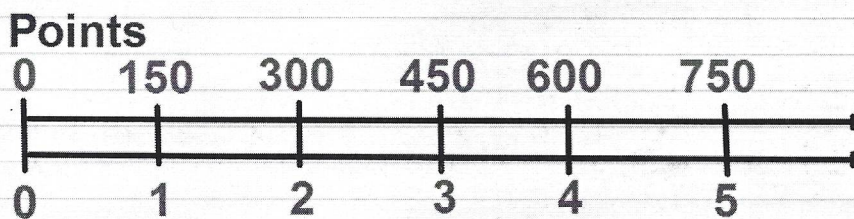


Chapter 5	Ratios and Rates	
Date:	5.3 Rates	
Essential Question	How can you use ratios to describe changes in real-life problems?	
Vocab	Word	Definition
	rate	<p>ratio of 2 quantities using different units.</p> <p>\$27 for 3 pizzas</p> 
	unit rate	<p>compares a quantity to one unit of the other quantity</p> <p>\$9 for 1 pizza</p>

Composition Book

- 1) The double number line shows the rate at which you earn points for successfully hitting notes in a music video game. Write a rate that represents this situation.



Notes

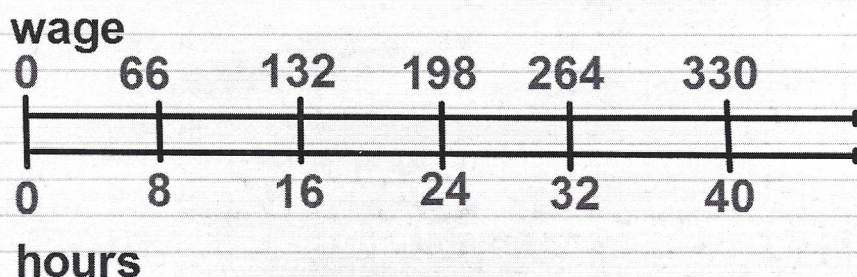
- There are 150 points for every note.
- There are 300 points for every 2 note.
- There are 450 points for every 3 note.
- There are 600 points for every 4 note.
- There are 750 points for every 5 note.

What is the unit rate? $150 : 1$

You earn 150 points for every note.

Composition Book

- 2) The double number line shows the rate at which you earn your salary. Write a rate that represents this situation.



You earn \$66 for every 8 hours you work.
You earn \$132 for every 16 hours you work.
You earn \$198 for every 24 hours you work.
You earn \$264 for every 32 hours you work.
You earn \$330 for every 40 hours you work.

What is the unit rate?

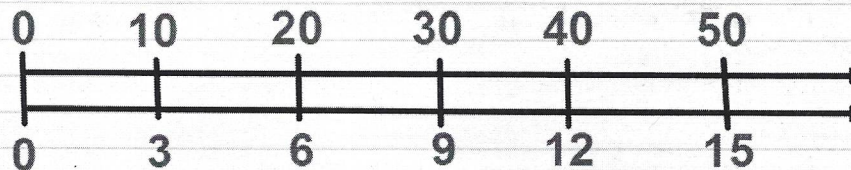
$$66 \div 8 = \$8.25$$

The wage for 1 hour is \$8.25.

Complete number 1 on your notes page.

- 1) Write a rate that represents this situation.

Strokes



Holes

You take 10 strokes for every 3 holes.

What is the unit rate? $3.3 : 1$

Complete number 3 in your composition book.

- 3) A piece of space junk travels 5 miles in 8 seconds. How far does it travel per second?

distance (miles)	$5 \div 8$	$\frac{5}{8}$ or 0.625
time (seconds)	$8 \div 8$	1

Complete numbers 2-5 on your notes page.

Write a unit rate for each situation.

2) 12 haircuts in 4 hours

haircuts	$12 \div 4$	3
hours	$4 \div 4$	1

3 haircuts in 1 hour

3) 15 liters in 3 minutes

liters	$15 \div 3$	5
minutes	$3 \div 3$	1

5 liters in 1 minute

4) 27 outs in 9 innings

outs	$27 \div 9$	3
innings	$9 \div 9$	1

3 outs in 1 inning

5) 36 children from 12 families

children	$36 \div 12$	3
families	$12 \div 12$	1

3 children in 1 family

Complete number 4 in your composition book.

4. A chef buys 6 pounds of salmon fillets for \$51. How much will the chef pay for 9 pounds of salmon fillets?

cost (dollars)	$51 \div 6$	8.5×9	76.5
salmon (pounds)	$6 \div 6$	1×9	9

9 pounds of salmon will cost \$76.50.

Complete number 4 in your composition book.

4. A chef buys 6 pounds of salmon fillets for \$51. How much will the chef pay for 9 pounds of salmon fillets?

cost (dollars)	$51 \div 6$	8.5×9	76.5
salmon (pounds)	$6 \div 6$	1×9	9

9 pounds of salmon will cost \$76.50.

Complete number 6 on your notes page.

- 6) You jog 2 kilometers in 12 minutes. At this rate, how long will it take you to complete a 5-kilometer race?

minutes	$12 \div 2$	6×5	30
kilometers	$2 \div 2$	1×5	5

Complete number 5 in your composition book.

5. Which car gets better gas mileage or are they the same?

Car A goes 96 miles on 4 gallons of gas.

Car B goes 380 miles on 15 gallons of gas.

Car A

miles	$96 \div 4$	24
gallons	$4 \div 4$	1

Car B

miles	$308 \div 15$	25.3
gallons	$15 \div 15$	1

Car A: 24 miles per gallon

Car B: 25.3 miles per gallon

Car B gets better gas mileage because it can go more miles than Car A on one gallon of gas.

Complete number 7 on your notes page.

7. Which fruit is a better deal or are they the same?

You spend \$3.45 for 5 apples.

You spend \$2.07 for 3 oranges.

Apples

apples	$5 \div 5$	1
cost	$3.45 \div 5$	0.69

Oranges

oranges	$3 \div 3$	1
cost	$2.07 \div 3$	0.69

Apples: \$0.69 for each apple

Oranges: \$0.69 for each orange

Apples and oranges cost the same amount.