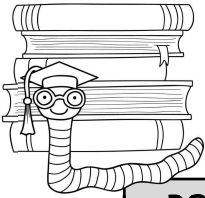


COMPARING RATIO TABLES

INTRODUCTION

Several students are participating in a reading challenge at West Middle School. They earn points for the number of books they read, improving their reading speed, and for reading to younger students. As the grade levels increase, the point values change. Complete each of the following tasks by applying your understanding of ratios and ratio tables.



TASK 1:

Each grade is given a different number of points for each book read.

6TH GRADERS

| BOOKS | POINTS |
|-------|--------|
| 2 | 68 |
| 5 | 170 |
| 8 | 272 |
| 11 | 374 |
| 14 | 476 |

7TH GRADERS

| BOOKS | POINTS |
|-------|--------|
| 3 | 117 |
| 5 | 195 |
| 7 | 273 |
| 9 | 351 |
| 11 | 429 |

8TH GRADERS

| BOOKS | POINTS |
|-------|--------|
| 2 | 72 |
| 4 | 144 |
| 6 | 216 |
| 8 | 288 |
| 10 | 360 |

ANALYZE:

- What do you notice that is different about these ratio tables?
- How are the values in the books column displayed?
- Write a ratio to compare the number of books read to the number of points earned for each grade level.

TASK 2:

Two additional grade levels decided to participate, but their results were incomplete. Each grade level used a constant ratio. Use the information given to complete the tables below.

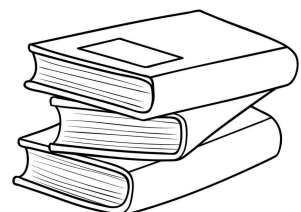
Which grade level earns points the fastest? Justify your thinking.

5TH GRADERS

| BOOKS | POINTS |
|-------|--------|
| 3 | |
| 4 | 168 |
| | 294 |
| 10 | |
| 13 | 546 |

9TH GRADERS

| BOOKS | POINTS |
|-------|--------|
| 2 | 70 |
| 5 | |
| 8 | 280 |
| | 385 |
| 14 | |



TASK 3:

Students in each grade level earn points for the number of minutes they spend reading aloud to younger students. Use the tables below to answer the questions

6TH GRADERS

| # OF MINUTES | # OF POINTS |
|--------------|-------------|
| 10 | 2 |
| 20 | 4 |
| 30 | 6 |
| 40 | 8 |

7TH GRADERS

| # OF MINUTES | # OF POINTS |
|--------------|-------------|
| 15 | 3 |
| 45 | 9 |
| 75 | 15 |
| 105 | 21 |

8TH GRADERS

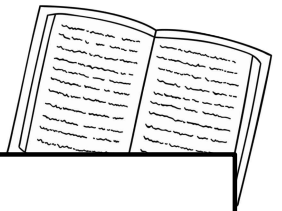
| # OF MINUTES | # OF POINTS |
|--------------|-------------|
| 25 | 5 |
| 50 | 10 |
| 75 | 15 |
| 100 | 20 |

DISCUSS:

- Determine the ratio of number of minutes read to number of points earned for each grade level.
- Describe your process in answering the question above.

TASK 4:

Read each scenario below and use the information to complete the ratio table.



A

Edgar reads 78 books in 13 months.

| 1 | |
|----|----|
| | 24 |
| | 42 |
| 10 | |
| 13 | 78 |

B

In six minutes, Jocelyn reads 15 pages.

| 6 | 15 |
|----|----|
| | |
| 18 | 45 |
| | 60 |
| | 75 |

C

Wu reads 25 mysteries for every 20 science fiction books.

| | 4 |
|----|----|
| | 8 |
| 15 | 12 |
| | |
| 25 | 20 |

D

The library shelves contain 28 non-fiction books for every 80 fiction books.

| 7 | |
|----|----|
| | 40 |
| | 60 |
| 28 | 80 |
| 35 | |

COMPARING RATIO TABLES

Use the ratio tables below to answer questions 1-5.

ROBERT

| MINUTES | WORDS |
|---------|-------|
| 2 | 304 |
| 5 | 760 |
| 8 | 1,216 |
| 11 | 1,672 |
| 14 | 2,128 |

MICHAELA

| MINUTES | WORDS |
|---------|-------|
| 3 | 483 |
| 5 | 805 |
| 7 | 1,127 |
| 9 | 1,449 |
| 11 | 1,771 |

LAURA

| MINUTES | WORDS |
|---------|-------|
| 2 | 316 |
| 4 | 632 |
| 6 | 948 |
| 8 | 1,264 |
| 10 | 1,580 |

1. Who has a typing speed above 160 words per minute?

2. How much faster does Laura type than Robert?

3. Order the students' typing speeds from least to greatest.

4. How long will it take Robert to type 2,508 words?

5. If Robert, Michaela, and Laura all type for 20 minutes, how many fewer words will Laura type than Michaela?

- a. 3,160 words
- b. 120 words
- c. 60 words
- d. 80 words

6. Millie's apple cobbler recipe uses 16 apples for 3 cobblers, while her peach cobbler recipe uses 8 peaches for 2 cobblers. Fill in the ratio tables below to find how many apples and peaches Millie will need to make 24 apple cobblers and 18 peach cobblers.

| | | | | |
|-----------------|--|--|--|--|
| APPLES | | | | |
| COBBLERS | | | | |

| | | | | |
|-----------------|--|--|--|--|
| PEACHES | | | | |
| COBBLERS | | | | |

