

Name:

Date:

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## Topic 3 Understanding & Representing Rates ~ Study Guide

Directions: READ each question carefully. Show ALL work to get full credit. Good Luck!

\* Use a calculator!

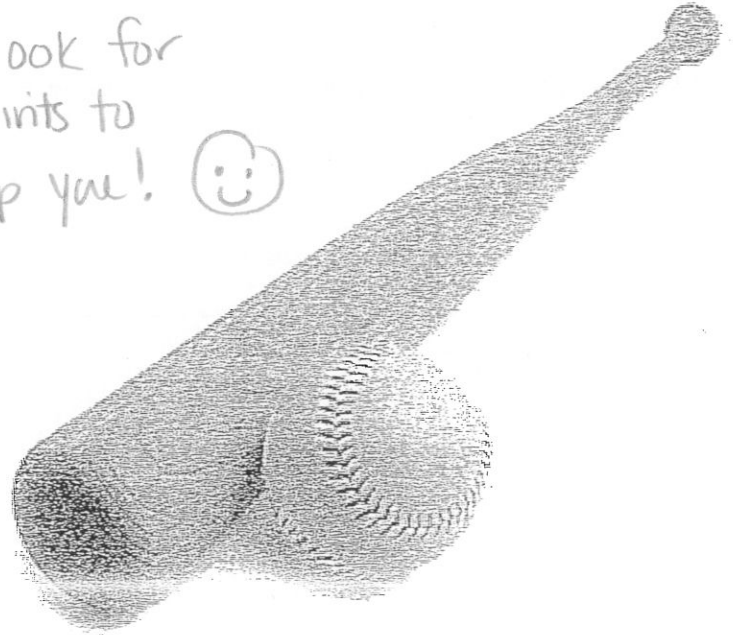
\* Please look for my hints to help you!



1.

John has a batting average of 0.350. Which of the following ratios of hits to "at bats" could describe John's record this season?

Divide each choice



A.  3 hits and 15 at bats

B.  31 hits and 50 at bats

C.  63 hits and 200 at bats

D.  7 hits and 20 at bats

2. You like juice drinks and your brother likes sport drinks. Your brother drinks 3 sports drinks a day. You drink 2 juice drinks a day. Each month you go to the store and buy different amounts of juice and sport drinks, and you never have any drinks left over from the previous month. Each month except for one, you both run out of drinks at the same time. Which months are the same?

A.  In January you buy 22 juice and 33 sport drinks.

B.  In February you buy 28 juice and 42 sport drinks.

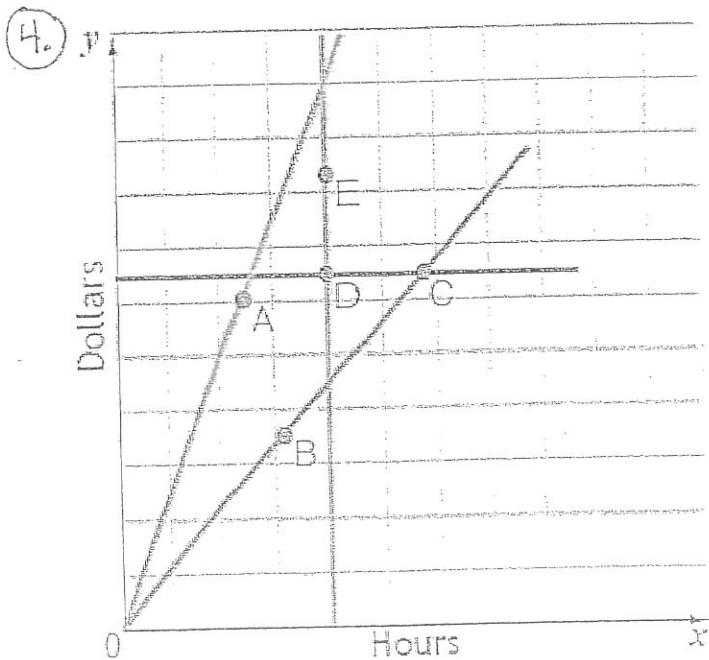
C.  In March you buy 51 sport and 34 juice drinks.

D.  In April you buy 39 sport and 24 juice drinks.

E.  In May you buy 21 sport and 14 juice drinks.

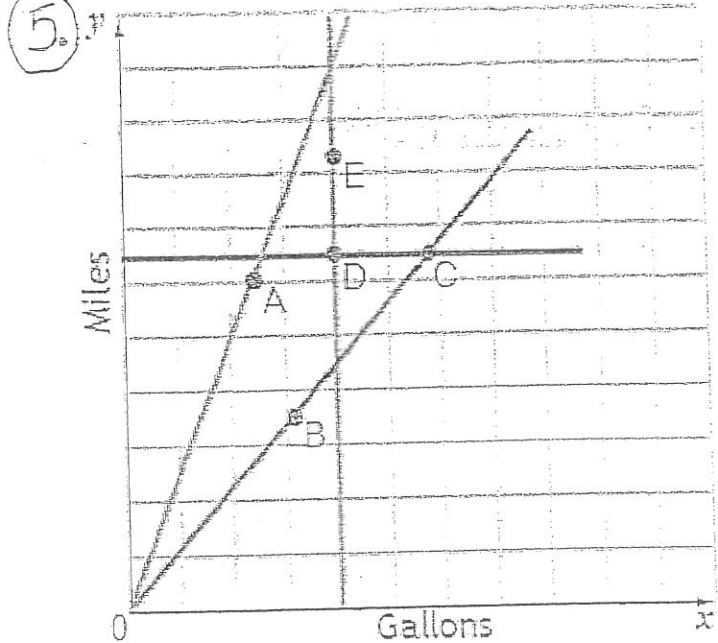
3. Darlene was paid \$203.00 for 28 hours of work. She was supposed to be paid \$7.40 per hour and she thinks her check is not correct. How much more should she have received?

$$\begin{array}{r} \$7.40 \\ \times 28 \\ \hline \end{array} \quad \begin{array}{r} - 203.00 \\ \hline \$ \end{array}$$



The graph indicates the weekly salaries for five employees: Albert, Bob, Chris, Doris, and Erlinda. The points labeled with the first letters of their names represent the salary of each employee in dollars and the number of hours each worked. Which line shows that two people have the same hourly rate?

- A.  the line through B and C
- B.  the line through A
- C.  the line through D and E
- D.  the line through D and C
- E.  None of the lines show hourly rate.



The graph provides information about five different models of cars labeled A, B, C, D, and E. Each car's label is positioned on the graph to show the number of miles the car traveled and the number of gallons it used. Which line indicates that two different model cars used the same amount of gas?

- A.  the line through D and E
- C.  the line through A

- B.  the line through B and C
- D.  the line through D and C

6. On Jeff's outgoing trip, he travels 648 miles and uses 18 gallons of gas. On his return trip, Jeff travels a different route. Jeff travels 672 miles on the return trip and uses 24 gallons of gas.

How many miles per gallon did Jeff's car get on the entire trip?

$$\frac{\text{total miles} \rightarrow}{\text{total gallons} \rightarrow} = \text{_____ then divide}$$

7. John has a 0.145 batting average. He has been at bat 200 times. How many hits does he have?

- A.  85 hits  $\frac{85}{200} =$
- C.  57 hits  $\frac{57}{200} =$
- E.  28 hits  $\frac{28}{200} =$

- B.  29 hits  $\frac{29}{200} =$
- D.  55 hits  $\frac{55}{200} =$

8. Margaret earns \$7.75 per hour for her regular shift and \$8.45 for overtime. She is paid overtime for all hours over 40 hours. What is her total pay for working 48 hours?

A.  \$348.75

C.  \$560.00

E.  \$288.75

①

\$ 7.75

x 40

②

\$ 8.45

x 8

B.  \$345.40

D.  \$377.60

③ then add

9. On last week's quiz, Matthew got 72% percent of the questions correct. If there were 25 questions on the quiz, how many questions did Matthew get correct?

A.  88 questions

B.  18 questions

C.  22 questions

$$\frac{\quad}{25} = \frac{72}{100}$$

10. On the unit test, Matthew got 36 questions correct and this represented 75% correct. How many questions were on the test?

A.  36 questions

B.  102 questions

C.  30 questions

D.  48 questions

$$\frac{36}{\quad} = \frac{75}{100}$$

11. At Central Middle School there are 525 students and 105 of them are in 6th grade. What percentage of the students are in 6th grade?

At Central Middle school,  % of students are in 6th grade.

$$\frac{105}{525} = \frac{\quad}{100}$$