

Math 20, Tuesday, July 29

Test #2

Break

Section 5.1 ~ Comparison Shopping Online
Rates + Ratios

Section 5.2 ~ Proportions

Bonus 2 due next Tuesday

Practice homework 5.1 + 5.2

No checkpoint on Thurs ☺

Fun Activity - Comparison Shopping
on the Internet

Section 5.1

Calculate
the
unit
price

64 ounces of Orange Juice

\$3.50

$\frac{\text{Price}}{\text{ounces}}$

$$\frac{\$3.50}{64} = 0.054$$

nearest
cent
↑

price per ounce

\$0.05/oz

22 ounces

\$2.00

$$\frac{\$2.00}{22}$$

= 0.0909

\$0.09/oz

Chapter 5 - Ratio, Proportion and measurement

Section 5.1 - Ratios and Rates

Ratios	Rates
Student to Instructor ratio $\frac{14}{1}$ 14:1 14 to 1 No units because the units are the same - people Sports $\frac{\text{shots made}}{\text{shots attempted}}$ 6:10 $\frac{6}{10}$	2 different units $\frac{\$ 3.99}{64 \text{ oz}} = \$ \text{ per ounce}$ or $\frac{\$ 150}{3 \text{ nights}} = \$ 50 \text{ per night}$ 34 mph ← miles per hour 22 mpg miles per gallon
14. 3 to 23 $\frac{3}{23}$	22. 14:21 $\frac{14}{21} = \frac{2}{3}$

26. 3 inches to 15 inches

$$\frac{3}{15} = \frac{1}{5}$$

32. 2.4 to 1.5

$$\frac{2.4 \times 10}{1.5 \times 10}$$

$$= \frac{24}{15}$$

$$= \frac{8}{5}$$

$$\frac{1.3 \times 100}{.26 \times 100} = \frac{130 \div 13}{26 \div 13}$$

$$= \frac{10}{2}$$

$$= \frac{5}{1} \text{ ratio}$$

1 yard = 3 feet
| 12 | 12 | 12 |

1 foot = 12 inches

44. 4 inches to 1 yard

4 inches to ~~12~~ 36 inches

$$\frac{4}{36} = \frac{1}{9}$$

48. 32 seconds to 2 minutes

120 seconds

60 seconds
in
1 minute

$$\frac{32}{120} = \frac{16}{60}$$

$$= \frac{8}{30}$$

$$= \frac{4}{15}$$

Ratios

Rates: 50. 45 applications for 18 openings

write as a rate:

$$\frac{45 \text{ applications}}{18 \text{ openings}} = \frac{5 \text{ applications}}{2 \text{ openings}}$$

← write the units

52. 3,000 students over a 16-year career

reduce $\frac{3,000 \text{ students}}{16 \text{ years}}$

$$= \frac{1500 \text{ students}}{8 \text{ years}}$$
$$= \frac{750 \text{ students}}{4 \text{ years}}$$
$$= \frac{375 \text{ students}}{2 \text{ years}}$$

write as a fraction in simplest form

58. 14 trips every 2 months

$$\frac{14 \text{ trips}}{2 \text{ months}}$$

$$= 7 \text{ trips per month}$$

unit rate

66. 150 barrels cost \$4,950

$\frac{\text{price}}{\text{unit}}$

$$\frac{\$4,950}{150}$$

$$= \$33 \text{ per barrel}$$