

To bring:

7:30 Write in one corner: $rate * time = distance$

Brought to you by $1/\sqrt{100}$

Put warm-ups on the board:

1) Turn in homework, take $(-2+3)$ donuts!

2) 14 is what percent of 50?

$$A: 14/50 = 28\%$$

3) What is 0.1 to the minus third power minus 5 to the third power?

$$A: 1000 - 125 = 875$$

4) Sound travels about 1100 fps at sea level.

How fast is it in miles per second? $A: 1100 f/s * mile/5280f = 0.208 mi/s$

How fast in miles per hour? $A: 0.208 mi/s * 60 s/m * 60 m/h = 750 mph$

5) What is the ratio of speed-of-light to the speed of sound?

$$A: 186,000mps / 0.208mps = 894231 \sim one\ million$$

6) The sun is about 93 million miles away. Light travels at 186,000 miles per second. How long will it take the light to reach the earth?

$$A: 93 M / 186 K = 500 sec$$

How many minutes and seconds is that?

$$A: 500 / 60 = 8 R 20$$

The trick is units: miles / (miles/sec) = seconds

*Rate times time = distance: miles/sec * sec = miles The units can cancel!*

7) What's the total number of babies in 2 sets of triplets, 2 sets of quadruplets and 2 sets of quintuplets?

$$A: (2 \times 3) + (2 \times 5) + (2 \times 4) = 24$$

$$or\ 2 \times (3 + 5 + 4) = 24$$

8) What is Dr. Dimento's real name?

9) Calculator races

Warmup: $1+1+1 \dots$ for ten seconds

Shortcut: $1+1[2^{nd}]K= = = \dots$ for ten seconds

8:10 Circulate attendance sheet

Return corrected homework

Explain how to use the statistics function on your calculator (if not covered last week)

Collect homework

8:15 Discuss warm-ups

8:20 Discuss top 3 homework problems – examine units

and note: $RATE * TIME = DISTANCE$

$$4d) \frac{12 \text{ miles}}{\frac{1}{3} \text{ hour}} = 12 \times \frac{3}{1} = 36 \frac{\text{miles}}{\text{hour}}$$

$$5d) \frac{196 + 169 + ?}{3} = 169 \frac{2}{3}, \Rightarrow 196 + 169 + ? = 509, \Rightarrow ? = 509 - 196 - 169 = 144$$

$$6a) 106 \frac{\text{people}}{\text{day}} \times 60 \text{ days} = 6360 \text{ people}$$

8:40 Lecture

9:00 Hand outs