

FEBRUARY 9, 2015 ^{5TH} ^{6TH} STARTER

Convert each unit or rate.

1. $1\frac{1}{2} \text{ ft} = \underline{18} \text{ in}$

$$\frac{\cancel{3 \text{ ft}}}{2} \cdot \frac{12 \text{ in}}{1 \text{ ft}} = \frac{36}{2}$$

2. $11880 \text{ ft} = \underline{2\frac{1}{4}} \text{ mi}$

$$\frac{11880 \text{ ft}}{1} \cdot \frac{1 \text{ mi}}{5280 \text{ ft}} = 2\frac{1}{4}$$

3. $2.5 \text{ gal} = \underline{10} \text{ qts}$

$$\frac{2.5 \text{ gal}}{1} \cdot \frac{4 \text{ qts}}{1 \text{ gal}} = 10$$

4. $2\frac{1}{2} \text{ hr} = \underline{9000} \text{ sec}$

$$\frac{\cancel{5 \text{ hr}}}{2} \cdot \frac{1800 \text{ sec}}{3600 \text{ sec}} = 9000$$

REPETE

2/9 Graphing Rates

You will need a **calculator** today so either get out your phone, if it has one, or go get one off of the counter.

What is a **rate**? a fraction with
2 different labels
(units)

What are some examples?

$$\frac{4 \text{ in}}{\text{sec}}$$

$$\frac{65 \text{ mi}}{\text{hr}}$$

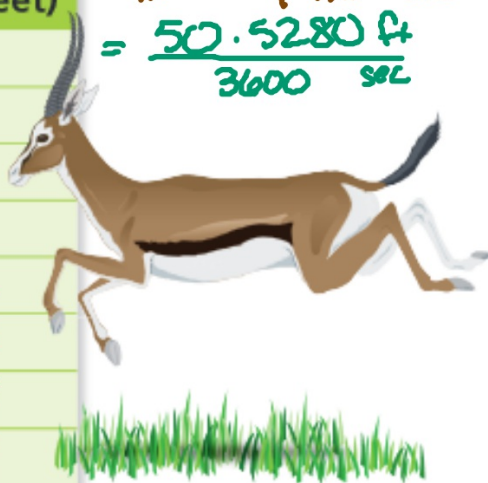
$$\frac{32 \text{ braincells}}{5 \text{ sec}}$$

Fill in the rest of the chart, if the gazelle runs 50 mph.

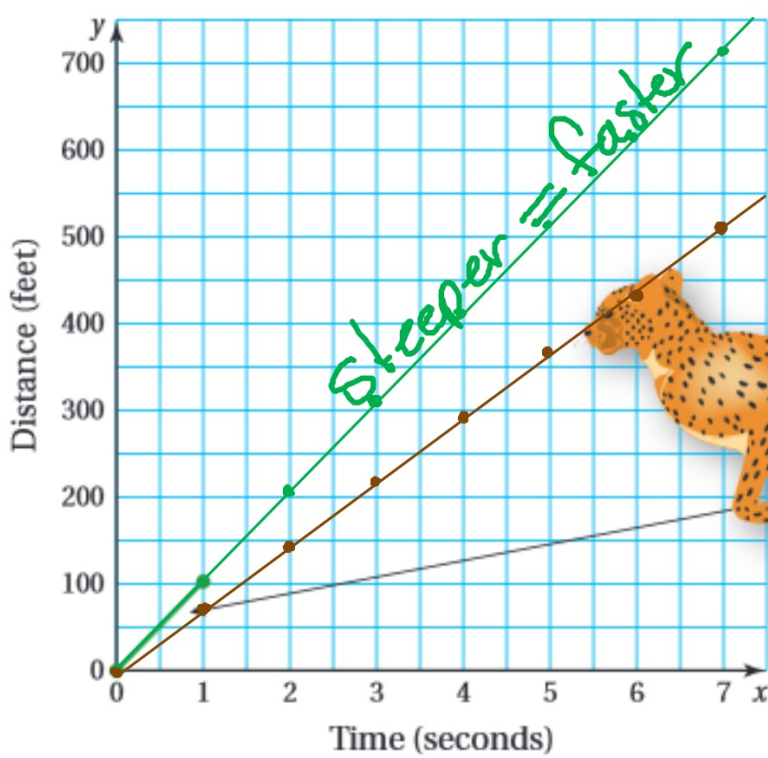
	Cheetah	Gazelle
Time (seconds)	Distance (feet)	Distance (feet)
x = 0	y = 0	0
1	102.6	73.3
2	205.2	146.6
3	307.8	219.9
4	410.4	293.2
5	513.0	366.5
6	615.6	439.8
7	718.2	513.1

$$50 \frac{\text{mi}}{\text{hr}} \cdot \frac{5280 \text{ ft}}{1 \text{ mi}} \cdot \frac{1 \text{ hr}}{3600 \text{ s}}$$

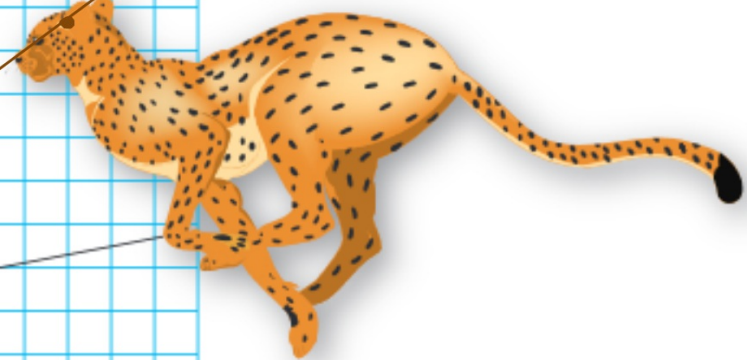
$$= \frac{50 \cdot 5280 \text{ ft}}{3600 \text{ sec}}$$



Graph the information for both animals on the same graph.



Cheetah is higher
has gone further



Quick Write (60 seconds):

What can graphs tell you about rates?

Pair Share:

Person on the LEFT goes first then switch when I tell you

Ideas: Shows which goes faster/larger
Gives the rate's label
It shows how many each has
Steeper = faster
Which is slower
Compares .

Fill in the chart then graph the information referring to the speed of a domestic pig, 16.0 ft/sec

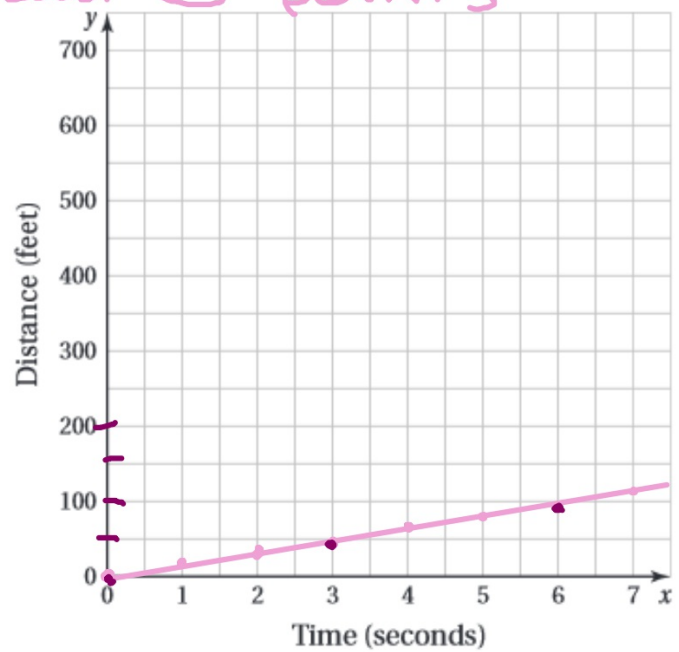
Use at least 3 points

Easy!

Time (seconds)	Distance (feet)
0	0
1	16
2	32
3	48
4	64
5	80
6	96
7	112

Almost 50

Almost 100

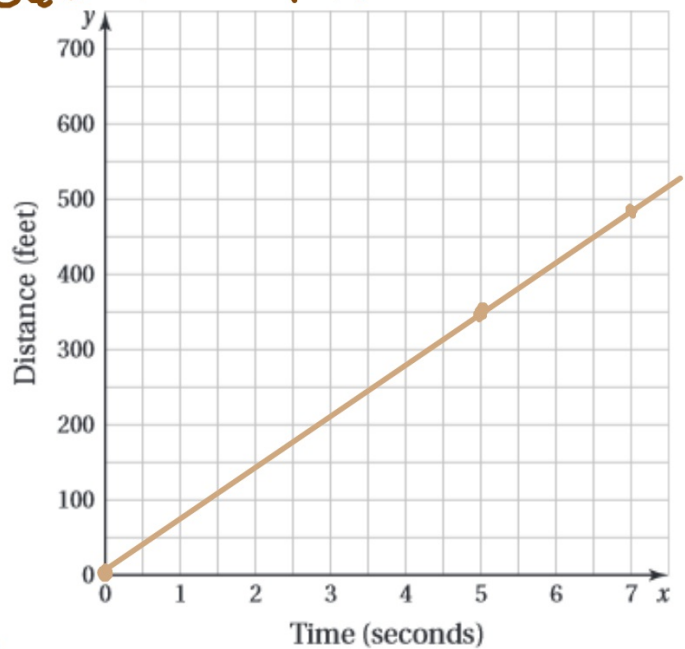


Fill in the chart then graph the information referring to the speed of a quarter horse, 47.5 mi/hr

$$47.5 \frac{\text{mi}}{\text{hr}} \cdot \frac{5280 \text{ ft}}{1 \text{ mi}} \cdot \frac{1 \text{ hr}}{3600 \text{ sec}} = 70 \text{ ft/sec}$$

$47.5 \times 5280 \div 3600 = 69.666667$

Time (seconds)	Distance (feet)
0	0
1	70
2	140
3	210
4	280
5	350
6	420
7	490



HOMWORK

Lilac WS 8

DUE Wednesday