Rate Word Problems

1. Juan types at a constant rate. He can type a full page of text in $3\frac{1}{2}$ minutes. We want to know how many pages, p, Juan can type after t minutes.

a) Write the linear equation in two variables that represents the number of pages Juan types in any given time interval.
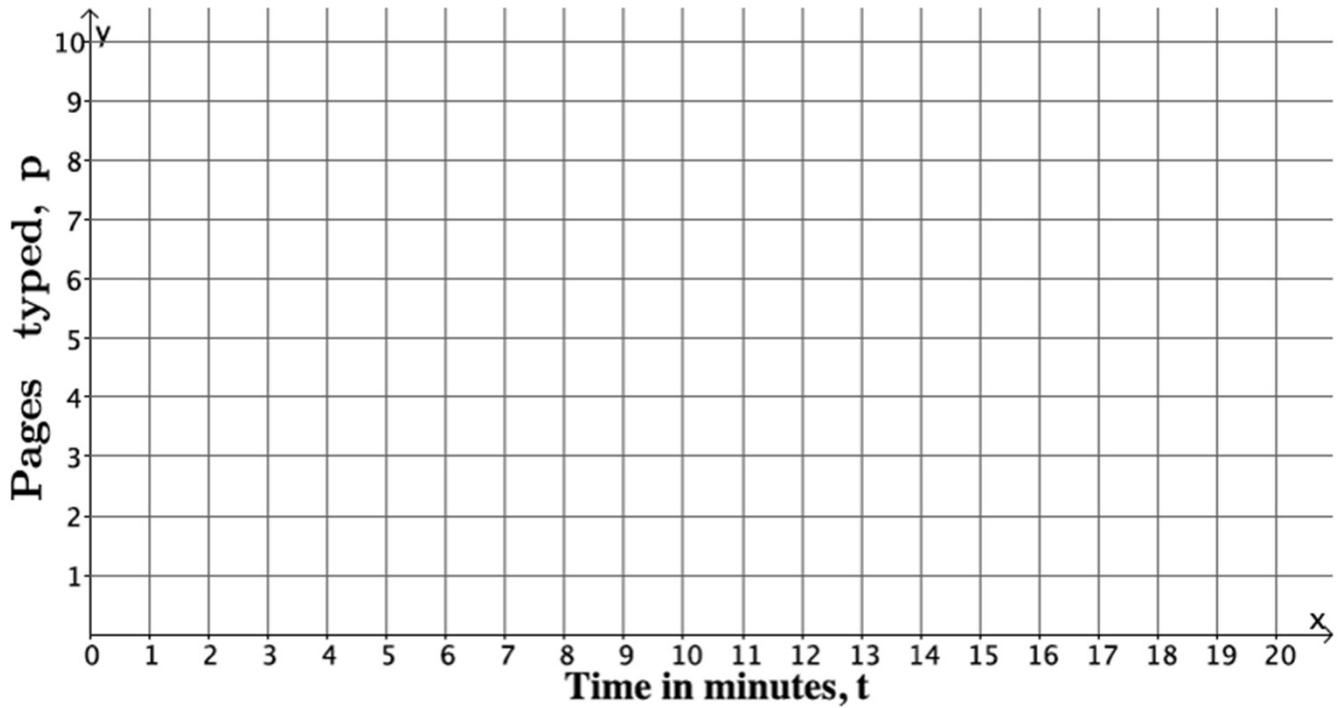
b) Complete the table below. Use a calculator, and round your answers to the tenths place.

t (time in minutes)	Linear Equation:	p (pages typed)
0		
5		
10		
15		
20		

Rate Word Problems

c) Graph the data on a coordinate plane.

d) About how long would it take Juan to type a **5**-page paper? Explain

Rate Word Problems

1. Juan types at a constant rate. He can type a full page of text in $3\frac{1}{2}$ minutes. We want to know how many pages, p, Juan can type after t minutes.

a) Write the linear equation in two variables that represents the number of pages Juan types in any given time interval.

Let C represent the constant rate that Juan types in pages per minute. Then,

$$\frac{1}{3.5} = C, \text{ and } \frac{p}{t} = C; \text{ therefore, } \frac{1}{3.5} = \frac{p}{t}.$$

$$\frac{1}{3.5} = \frac{p}{t}$$

$$3.5p = t$$

$$\frac{3.5}{3.5}p = \frac{1}{3.5}t$$
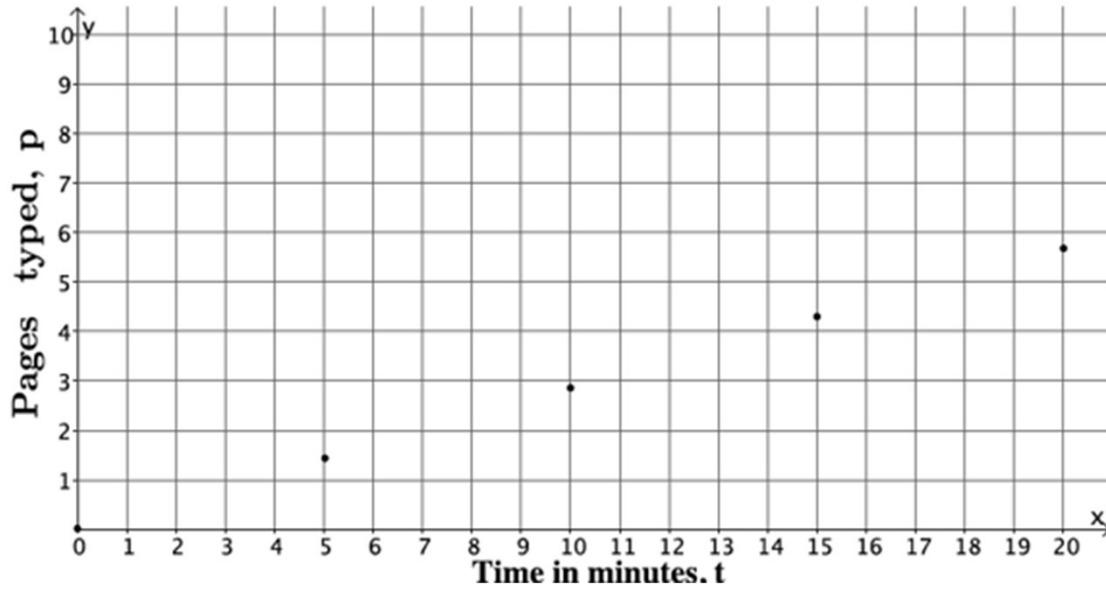
$$p = \frac{1}{3.5}t$$

b) Complete the table below. Use a calculator, and round your answers to the tenths place.

t (time in minutes)	Linear Equation: $p = \frac{1}{3.5}t$	p (pages typed)
0	$p = \frac{1}{3.5}(0)$	0
5	$p = \frac{1}{3.5}(5)$	$\frac{5}{3.5} \approx 1.4$
10	$p = \frac{1}{3.5}(10)$	$\frac{10}{3.5} \approx 2.9$
15	$p = \frac{1}{3.5}(15)$	$\frac{15}{3.5} \approx 4.3$
20	$p = \frac{1}{3.5}(20)$	$\frac{20}{3.5} \approx 5.7$

Go to onlinemathlearning.com for more free math resources

Rate Word Problems

c) Graph the data on a coordinate plane.

d) About how long would it take Juan to type a **5**-page paper? Explain

It would take him between 15 and 20 minutes. After 15 minutes, he will have typed 4.3 pages. In 20 minutes, he can type 5.7 pages. Since 5 pages is between 4.3 and 5.7, then it will take him between 15 and 20 minutes.

Go to onlinemathlearning.com for more free math resources