Math 7

Unit 5 Test Review

Write the ratio as a fraction in simplest form

a) 24 red balloons: 16 blue balloons

b) 44 miles to 4 miles

Write the ratio as a fraction in simplest form

a) 24 red balloons: 16 blue balloons

$$\frac{3}{2}$$

b) 44 miles to 4 miles

$$\frac{11}{1}$$

Find the unit rate

a) 120 miles per 4 hours

b) 440 miles per 8 gallons

Find the unit rate

a) 120 miles per 4 hours

$$\frac{120}{4} = \frac{x}{1}$$

$$\frac{30}{1} \text{ or } 30 \text{ miles per hour}$$

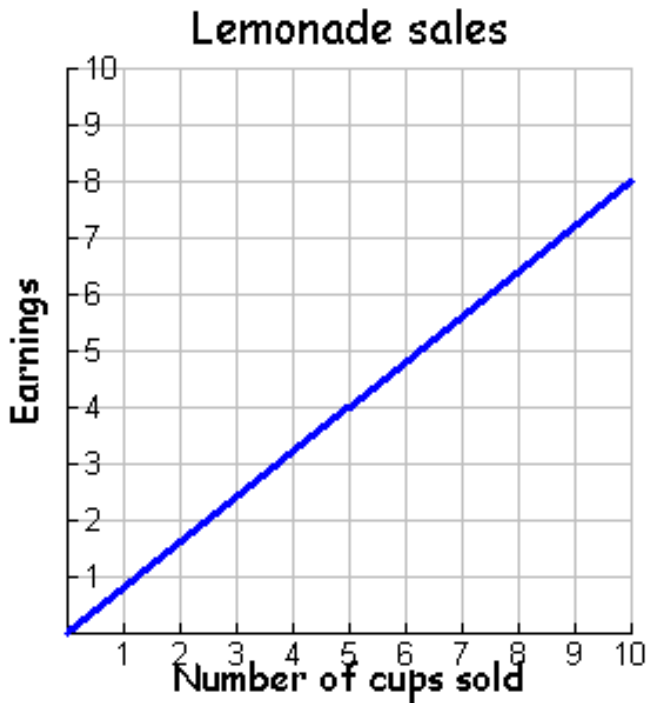
b) 440 miles per 8 gallons

$$\frac{440}{8} = \frac{x}{1}$$

$$\frac{55}{1} \text{ or } 55 \text{ miles per gallon}$$

Are the graphs proportional?

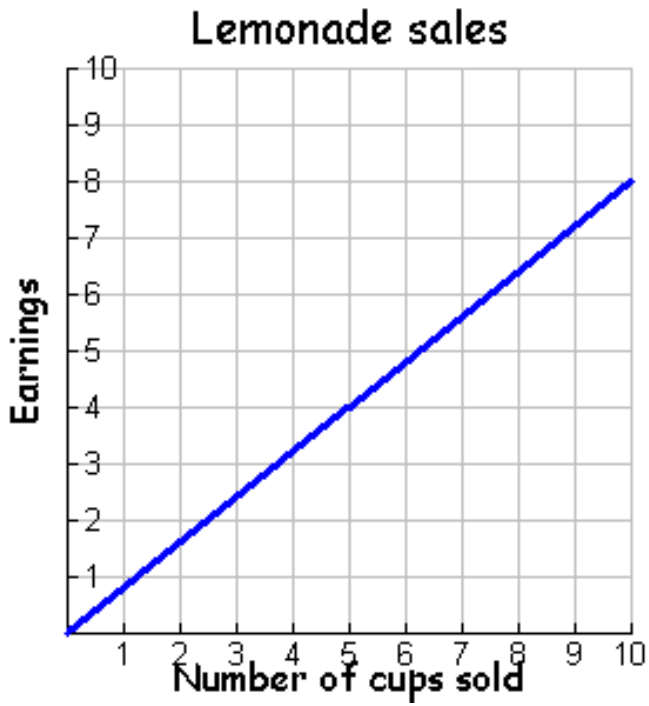
a)



b

Are the graphs proportional?

a)



b

a) Yes, Straight line through origin

b) No, not through the origin

Tell whether the ratios form a proportion

a) $\frac{1}{7}, \frac{6}{42}$

b) $\frac{3}{4}, \frac{15}{30}$

Tell whether the ratios form a proportion

a) $\frac{1}{7}, \frac{6}{42}$ Yes, because 1 times 42 = 6 times 7

b) $\frac{3}{4}, \frac{15}{30}$ No, because 3 times 30 ≠ 15 times 4

Use the table to write a proportion

a)

	Thursday	Friday
Dollars	56	72
Hours	7	*h*

b)

	Series 1	Series 2
Games	g	10
Losses	2	*4*

Use the table to write a proportion

a)

	Thursday	Friday
Dollars	56	72
Hours	7	*h*

$$\frac{56}{4} = \frac{72}{h}$$

b)

	Series 1	Series 2
Games	*g*	10
Losses	2	4

$$\frac{g}{2} = \frac{10}{4}$$

Solve the proportion

a) $\frac{x}{3} = \frac{24}{18}$ $x = 4$

b) $\frac{4}{9} = \frac{36}{z}$ $z = 81$

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The amount of time needed to download music is shown in the table. Find the rate in megabytes per second.

Megabytes	Seconds
3	12
6	24
9	36
12	48

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¼ megabyte per second or 0.25 megabyte per second

You advance 4 levels in 12 minutes. Your friend advances 6 levels in 24 minutes. Are these rates proportional? Explain

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No, they are not proportional

$$\frac{4}{12} \neq \frac{6}{24}$$

$$4 \cdot 24 \neq 6 \cdot 12$$

$$96 \neq 72$$

You spend 220 minutes in 4 classes. Write and solve a proportion to find out how many minutes you spend in 6 classes.

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$$\frac{220}{4} = \frac{m}{6}$$

330 minutes in 6 classes

A show with three acts lasts 5 hours. At this rate, how many hours is a show with 5 acts?

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$$\frac{3}{5} = \frac{5}{h}$$

$$h = \frac{25}{3} = 8\frac{1}{3}$$

8 and one third hours (8 hours and 20 minutes)

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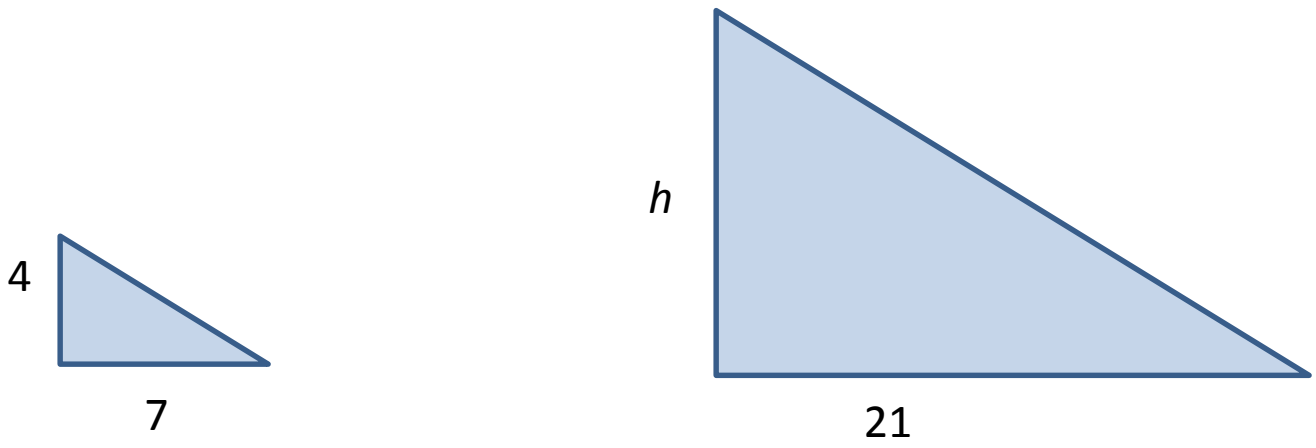

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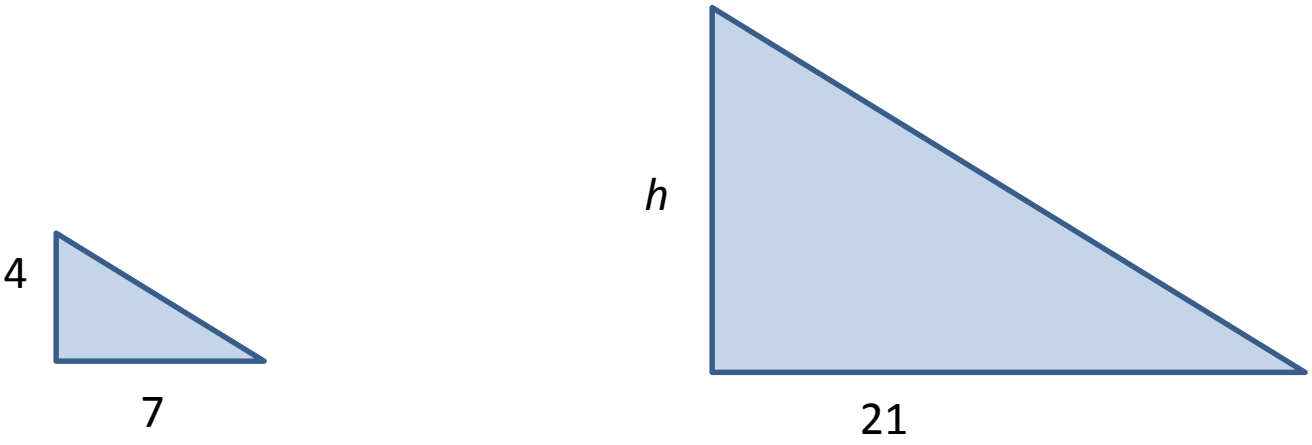
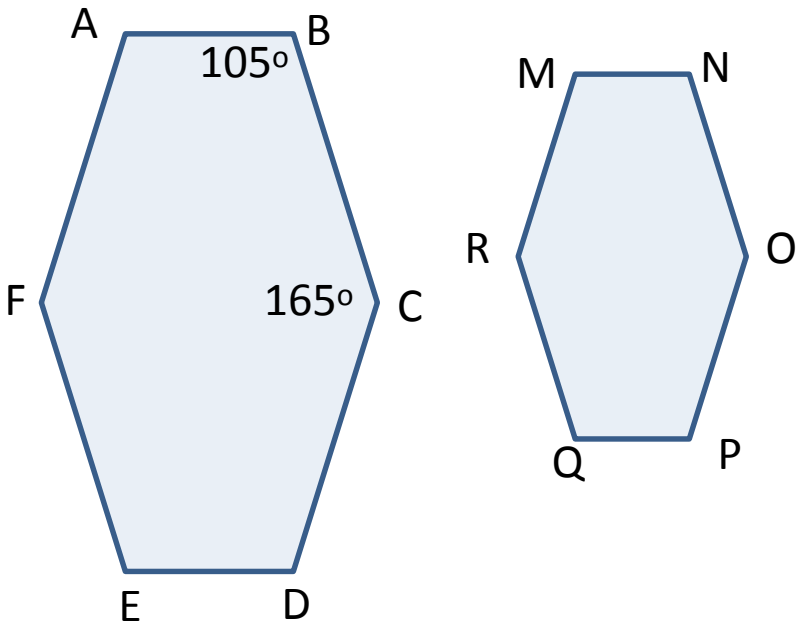


$h = 12$

Hexagon ABCDEF is similar to hexagon MNOPQR. What is the measurement of angle N?



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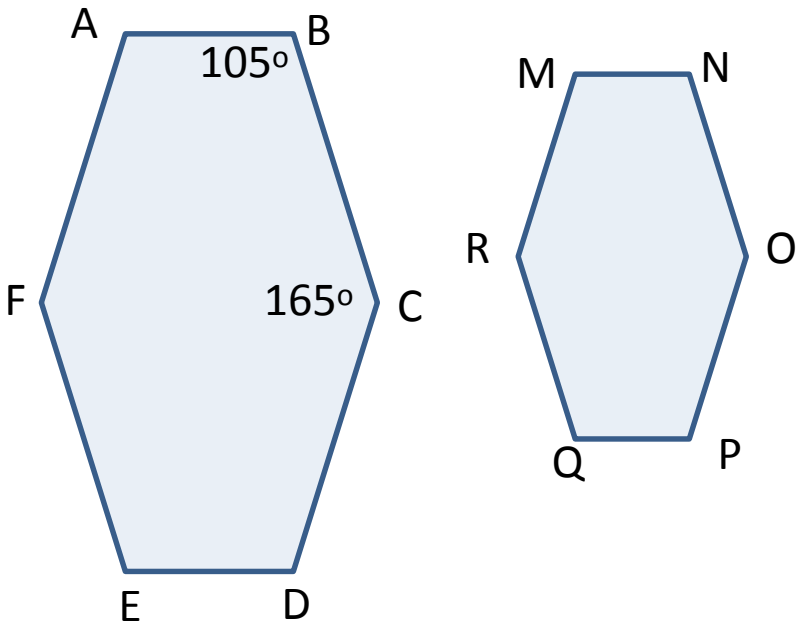
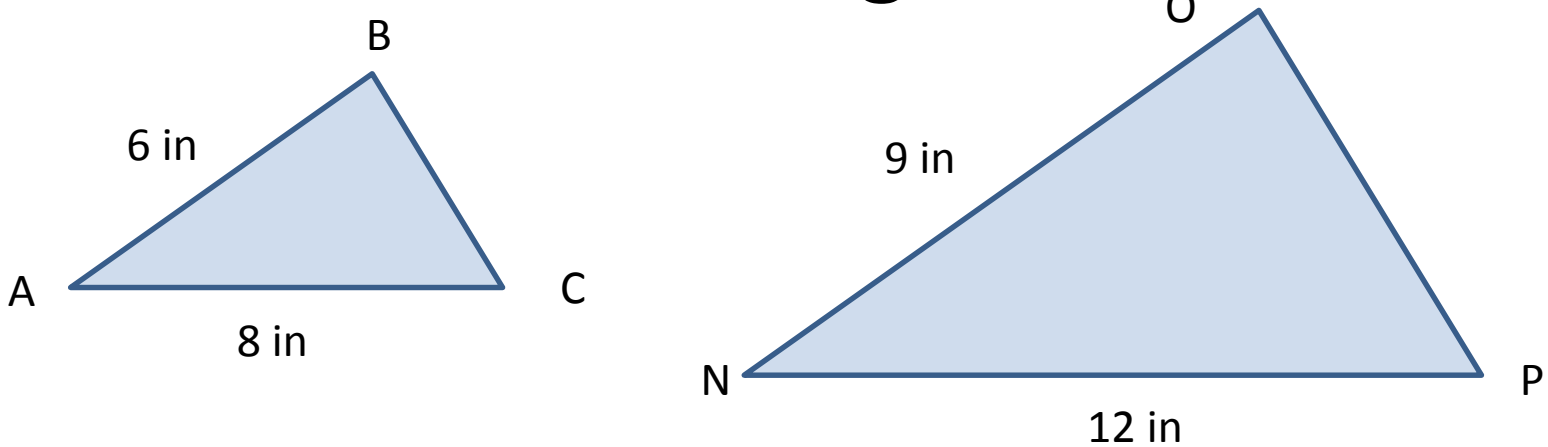


Measure of angle N = 105°

Triangle ABC is similar to triangle. What is the relationship between the corresponding sides of the two triangles?



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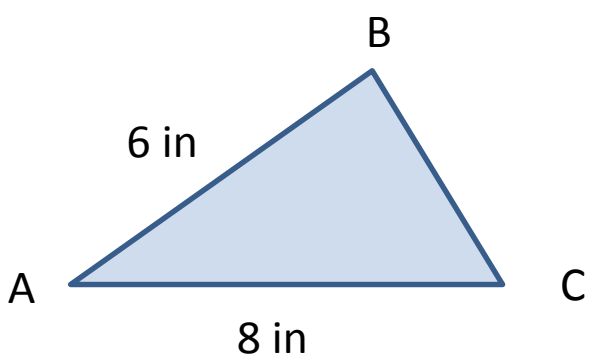

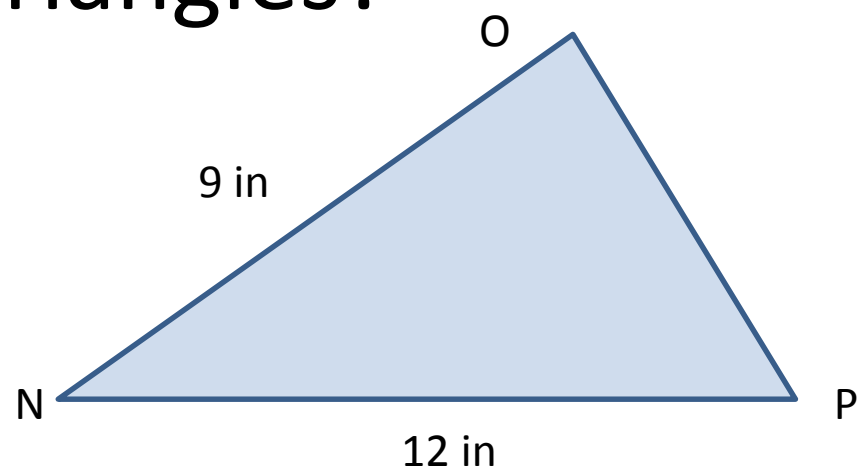

$$\frac{AB}{NO} = \frac{6}{9}$$