Geo
Ch 7

— Key —

Review (continued)

1. Find the geometric mean of the given numbers by setting up + solving a proportion.

a) 12 + 18 b) 6 + 24

a) $\frac{12}{x} = \frac{x}{18}$ $\sqrt{x^2} = \sqrt{216}$ $x = \sqrt{216}$ (36, 6) $x = \pm 6\sqrt{6}$

b) $\frac{6}{x} = \frac{x}{24}$ $x^2 = 144$ $x = \pm 12$

+/− because not part of

2. Given $\frac{k}{l} = \frac{m}{n}$, which of the following are true based on properties of proportions?

a) $kl = mn$ b) $\frac{k}{l+k} = \frac{m}{m+n}$ c) $\frac{l}{n} = \frac{k}{m}$ d) $\frac{n}{m} = \frac{l}{k}$

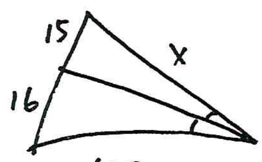
a) False - k+l don't meet thru cross mult.

b) False - you can add denoms to top, but not other way around

c) True d) True (Both cross multiply to get $kn = lm$)

3. Find x.

a)

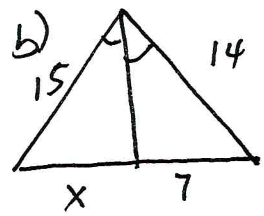


$\frac{x}{15} = \frac{40}{16}$

$16x = 600$

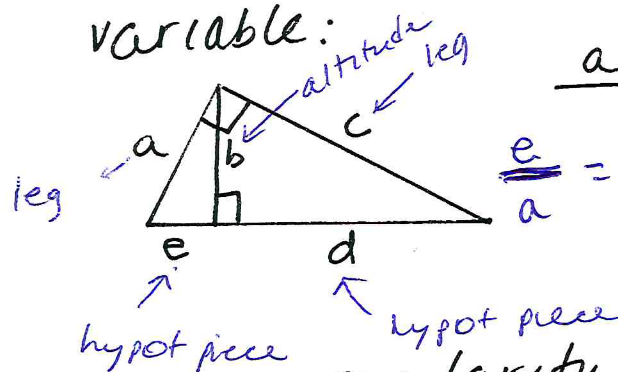
$x = 600/16 = 75/2$

b)



$\frac{15}{x} = \frac{14}{7}$ $\frac{14x = 105}{14}$ $x = \frac{105}{14}$ ÷7 $x = \frac{15}{2}$

4. Set up a proportion to solve for the indicated variable:

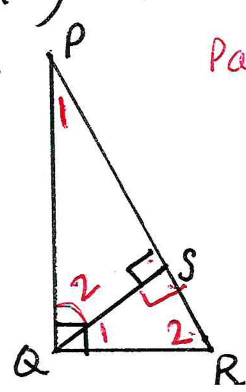


a leg: $\frac{e}{a} = \frac{a}{e+d}$

b altitude: $\frac{e}{b} = \frac{b}{d}$

c leg: $\frac{d}{c} = \frac{c}{e+d}$

5. Write a similarity statement for the triangle shown:



Pattern for naming used: 1-2-Right

$\triangle$ PRQ ~ $\triangle$ PQS ~ $\triangle$ QRS

BIG $\triangle$ MED $\triangle$ LITTLE $\triangle$