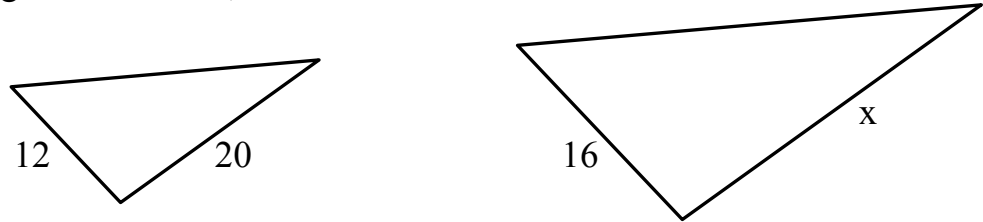
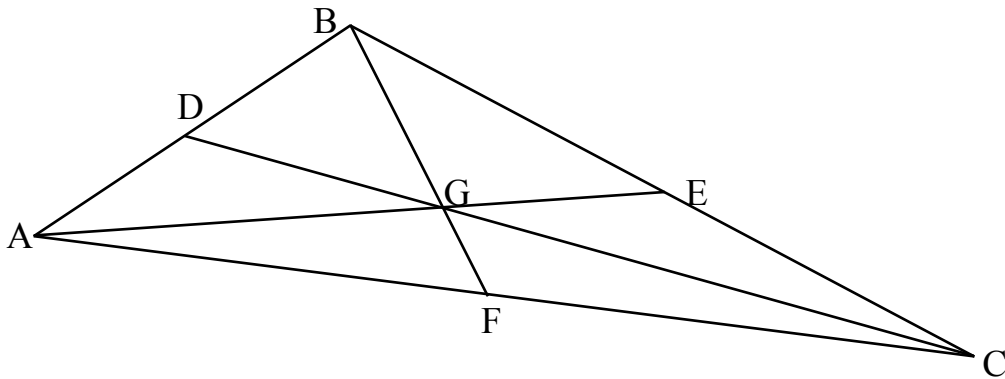


Geometry Homework #9

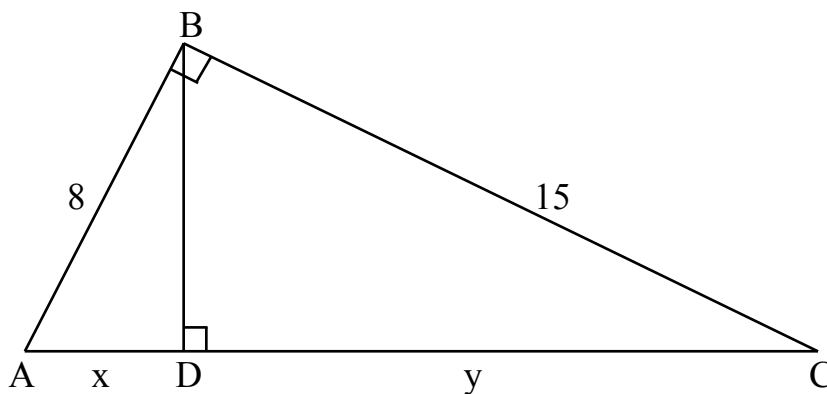
- 1) If these two triangles are similar, find x .



- 2) AE , BF , and CD are all medians of triangle ABC , and they all intersect at point G . If the area of triangle $ABC = 84$, what is the area of triangle ABG ? If $DC = 18$, $AG = 10$, and $BC = 14$, what is the perimeter of triangle GEC ?



- 3) If BD is an altitude of right triangle ABC and $AB = 8$ while $BC = 15$, find x and y .



- 4) Find the surface area and volume for a right, regular, heptagonal prism with a height of 11, a radius of 13, and a perimeter of 70 around its base.
- 5) Find the surface area and volume for a right, regular, quadrilateral prism with a height of 7 and a diameter of a circle circumscribed about its base of $12\sqrt{2}$.

- 6) Find the 12th term of the arithmetic sequence 11, 19, 27, 35...
- 7) Find a formula to calculate any term for the arithmetic sequence -2, 4, 10, 16...
- 8) Find the sum of all of the odd numbers from 13 to 51 without adding them all up.
- 9) Find a formula to calculate any term for the arithmetic sequence 27, 12, -3, -18...
- 10) A company decides to crowd fund a new project on Kickstarter. If it takes 8 minutes for the company to raise \$50 and then they receive a \$5 donation every 8 minutes after that, how much money will they have raised after 192 minutes?
- 11) Find a formula to calculate any term for the arithmetic sequence 18, 29, 40, 51...
- 12) Find the 9th term of the arithmetic sequence 32, 15, -2, -19...
- 13) A scientist listening for signals at a radio antenna hears a signal after 8 seconds, followed by another at 15 seconds, and another at 22 seconds. If the signals continue to follow an arithmetic sequence, find a formula to calculate when the signals will occur and use it to predict when the 23rd signal will occur.
- 14) Find the 97th term of the arithmetic sequence -19, -10, -1, 8...
- 15) Find the sum of all of the whole numbers from 1 to 203 without adding them all up.
- 16) Find the sum of all of the even numbers from 34 to 88 without adding them all up.
- 17) Find a formula to calculate any term for the arithmetic sequence -35, -28, -21, -14...
- 18) Find the sum of all of the whole numbers from 19 to 157 without adding them all up.

- 19) A company decides to crowd fund a new project on Kickstarter. If it takes 12 minutes for the company to raise \$75 and then they receive a \$7 donation every 12 minutes after that, how much money will they have raised after 4 hours and 36 minutes?
- 20) Find a formula to calculate any term for the arithmetic sequence -18, -11, -4, 3... and use this formula to calculate the 89th term.