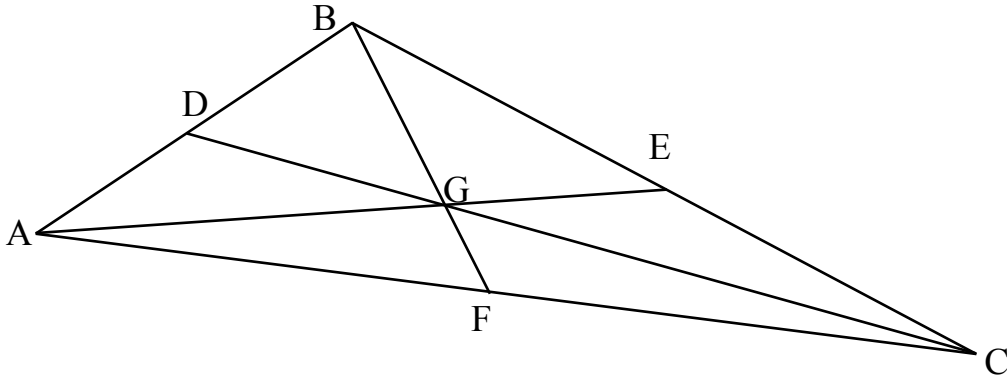
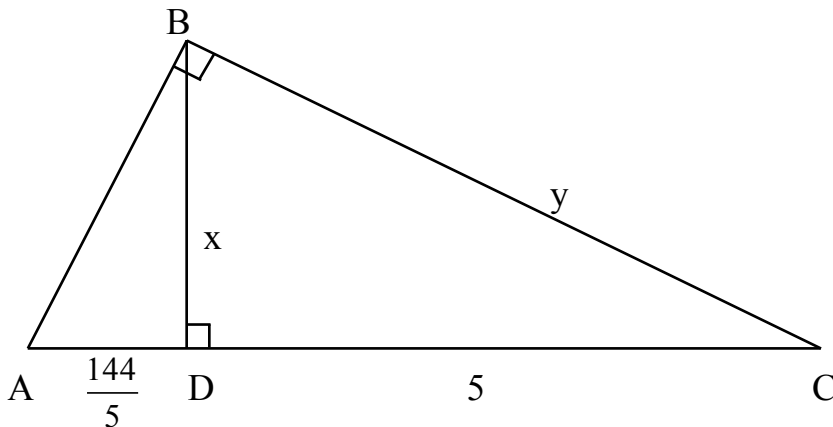


Geometry Homework #8

- 1) AE, BF, and CD are all medians of triangle ABC, and they all intersect at point G. If the area of polygon DGFCB = 64, what is the area of triangle ABE? If BF = 9, DG = 4, and AF = 10, what is the perimeter of triangle FGC?



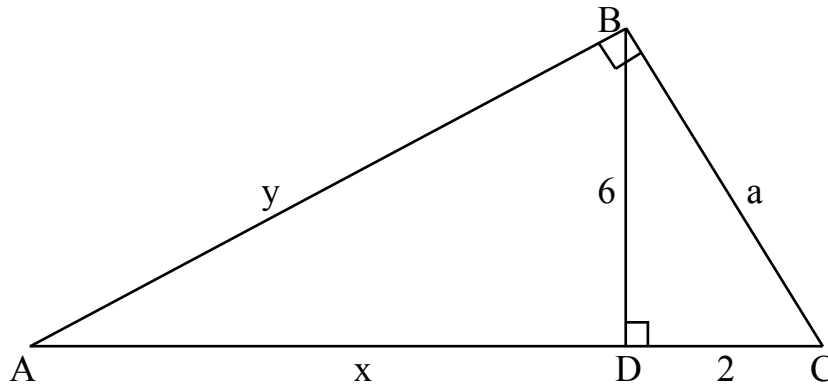
- 2) If BD is an altitude of right triangle ABC and $AD = \frac{144}{5}$ while $DC = 5$, find x and y.



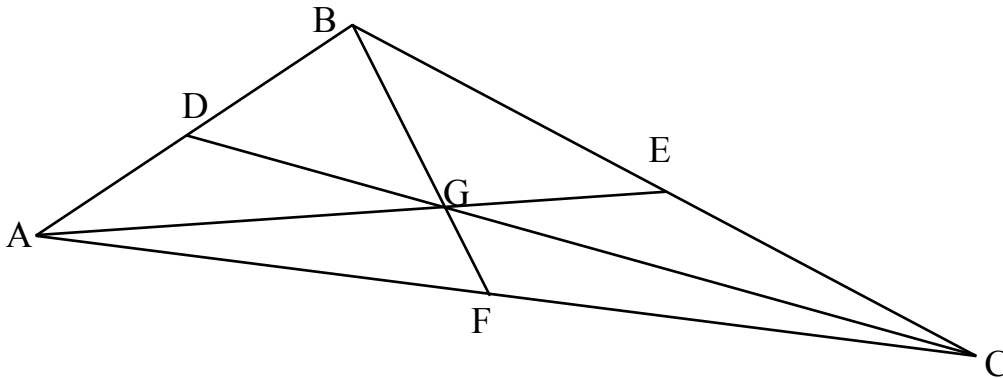
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- 3) If BD is an altitude of right triangle ABC and $BD = 6$ while $DC = 2$, find a , x , and y .



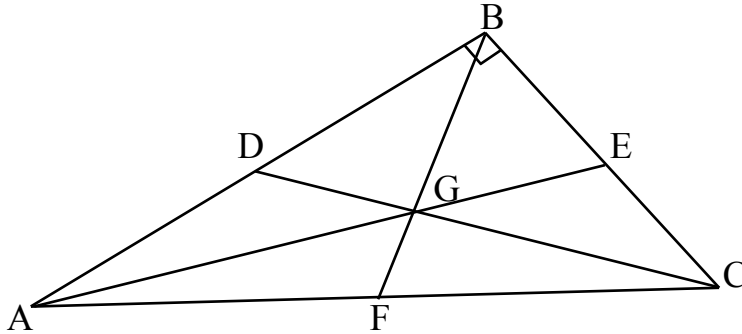
- 4) AE , BF , and CD are all medians of triangle ABC , and they all intersect at point G . If the area of triangle $ABG = 48$, what is the area of triangle CFB ? If $BC = 16$, $EG = 5$, and $DB = 6$, what is the perimeter of triangle ABE ?



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- 5) AE, BF, and CD are all medians of right triangle ABC, and they all intersect at point G. Angle ABC is a right angle. If the area of triangle ABE = 30, what is the area of triangle GEC? If AD = 5 and AE = 12, what is the length of AG and the perimeter of triangle ABC?



- 6) Find the surface area and volume for a right, regular, triangular prism with a height of 8 and a side length of $6\sqrt{3}$.
- 7) Find the surface area and volume for a right, regular, pentagonal prism with a height of 7, a side length of 12, and a radius of 10.
- 8) Find the surface area and volume for a right, regular, octagonal prism with a height of 9, an apothem of 3, and a radius of 5.
- 9) Find the surface area and volume for a right, regular, quadrilateral prism with a height of 5 and a side length of 8.
- 10) Find the surface area and volume for a right, regular, hexagonal prism with a height of 10 and an apothem of $4\sqrt{3}$.
- 11) Find the surface area and volume for a right, regular, nonagonal prism with a height of 4, a side length of 10, and a radius of 13.
- 12) Find the surface area and volume for a right, regular, heptagonal prism with a height of 6, a side length of 14, and a radius of 9.
- 13) Find the surface area and volume for a right, regular, hexagonal prism with a height of 4 and a radius of 14.
- 14) Find the surface area and volume for a right, regular, nonagonal prism with a height of 6, a side length of 10, and a radius of 13.

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- 15) Find the surface area and volume for a right, regular, quadrilateral prism with a height of 5, and a radius of $8\sqrt{2}$.
- 16) Find the surface area and volume for a right, regular, triangular prism with a height of 14 and an apothem of 6.
- 17) Find the surface area and volume for a right, regular, pentagonal prism with a height of 9, an apothem of 15, and a radius of 17.
- 18) Find the surface area and volume for a right, regular, decagonal prism with a height of 13, a side length of 18, and a radius of 16.
- 19) Find the surface area and volume for a right, regular, octagonal prism with a height of 14, a radius of 9, and a perimeter of 48 around its base.
- 20) Find the surface area and volume for a right, regular, hexagonal prism with a height of 12 and a diameter of a circle inscribed in its base of $16\sqrt{3}$.

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