



# Equation of a Median

Name \_\_\_\_\_

Score \_\_\_\_\_

MC:10

1) A, B and C are vertices of  $\triangle ABC$ . If  $\overline{CD}$  is the median of the triangle, find the equation of the median  $\overline{CD}$ .

A(x, y)	B(x, y)	C(x, y)	D(x, y)	Equation of median $\overline{CD}$
(-2, 5)	(0, -4)	(3, 2)		
(6, 10)	(-1, -3)	(5, 4)		
(-4, -1)	(2, -7)	(-8, 0)		

2) P, Q and R are vertices of  $\triangle PQR$ . If  $\overline{PS}$  is the median of the triangle, find the equation of the median  $\overline{PS}$ .

P(x, y)	Q(x, y)	R(x, y)	S(x, y)	Equation of median $\overline{PS}$
(4, 2)	(-5, 6)	(7, -4)		
(-3, -8)	(0, 4)	(-2, 0)		
(6, 0)	(-2, -2)	(1, -7)		

3) F, G and H are vertices of  $\triangle FGH$ . If  $\overline{GE}$  is the median of the triangle, find the equation of the median  $\overline{GE}$ .

F(x, y)	G(x, y)	H(x, y)	E(x, y)	Equation of median $\overline{GE}$
(-9, -1)	(2, 5)	(-3, -3)		
(0, -2)	(-1, -5)	(6, 1)		
(7, 7)	(-4, 2)	(9, -1)		



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## Answer key

MC:10

1) A, B and C are vertices of  $\triangle ABC$ . If  $\overline{CD}$  is the median of the triangle, find the equation of the median  $\overline{CD}$ .

A(x, y)	B(x, y)	C(x, y)	D(x, y)	Equation of median $\overline{CD}$
(-2, 5)	(0, -4)	(3, 2)	$\left(-1, \frac{1}{2}\right)$	$3x - 8y = -7$
(6, 10)	(-1, -3)	(5, 4)	$\left(\frac{5}{2}, \frac{7}{2}\right)$	$x - 5y = -15$
(-4, -1)	(2, -7)	(-8, 0)	$(-1, -4)$	$4x + 7y = -32$

2) P, Q and R are vertices of  $\triangle PQR$ . If  $\overline{PS}$  is the median of the triangle, find the equation of the median  $\overline{PS}$ .

P(x, y)	Q(x, y)	R(x, y)	S(x, y)	Equation of median $\overline{PS}$
(4, 2)	(-5, 6)	(7, -4)	$(1, 1)$	$x - 3y = -2$
(-3, -8)	(0, 4)	(-2, 0)	$(-1, 2)$	$5x - y = -7$
(6, 0)	(-2, -2)	(1, -7)	$\left(-\frac{1}{2}, -\frac{9}{2}\right)$	$9x - 13y = 54$

3) F, G and H are vertices of  $\triangle FGH$ . If  $\overline{GE}$  is the median of the triangle, find the equation of the median  $\overline{GE}$ .

F(x, y)	G(x, y)	H(x, y)	E(x, y)	Equation of median $\overline{GE}$
(-9, -1)	(2, 5)	(-3, -3)	$(-6, -2)$	$7x - 8y = -26$
(0, -2)	(-1, -5)	(6, 1)	$\left(3, -\frac{1}{2}\right)$	$9x - 8y = 31$
(7, 7)	(-4, 2)	(9, -1)	$(8, 3)$	$x - 12y = -28$