## Ch. 4: Linear Functions Review

1. Use the distance formula to calculate the length of $\mathbf{A B}$ for points $A(7,-3)$ and $B(-2,4)$.
2. Find the midpoint of line segment AB , given $A(9,-12)$ and $B(5,-6)$.
3. In $\triangle \mathrm{ABC}$, find the median from B to AC , given $A(4,-9), B(3,-5)$ and $C(-8,-1)$.
4. The midpoint of line segment AB is $M(6,-10)$. If $A(-2,-3)$ is one of the endpoints, what are the coordinates of the other endpoint?
(Hint: solve $x$, solve $y$ )
5. Find the slope of line segment AB , given $A(-5,-2)$ and $B(3,-6)$.
6. Write equations for the following:
a) $(-8,3),(-1,4)$
b) parallel to $4 y-5 x=6, x$-intercept of -9
c) perpendicular to $2 x-3 y+10=0, y$-intercept of 6
7. Write the following in general form:
a) $m=\frac{4}{-3},(7,-2)$
b) $(10,-2),(4,6)$
c) parallel to $y=\frac{2}{5} x-4, y$-intercept of 3
d) perpendicular to $3 x-y-24=0,(-3,8)$
8. Short answer questions:
a) Find the slope: $3 y=8 x-1$
b) Find the $y$-intercept: $\quad 5 x-2 y=8$
c) Find the perpendicular slope: $y=\frac{7}{3} x-5$
d) Write as slope-intercept: $\quad 9-2 x-2 y=0$
e) Find the parallel slope: $4 x-6 y+2=0$
f) Find the point on the line: $y-2=4(x+1)$
g) Find the midpoint of:
$(8,-10)$ and $(11,2)$
h) Simplify: $\sqrt{80}$
