

Geometry Honors-Chapter 1 Mixed Review Worksheet

- 1) The line $y = -3$ is a reflection of the line $y = 5$. What is the equation for the line of reflection?
- 2) The midpoint of \overline{AC} is $B(5/3, 3)$. If $A(2/3, -5)$, find the coordinates for C .
- 3) \overline{WZ} has endpoints $W(-3, -8)$ and $Z(5, 12)$. Point X lies between W and Z , such that $WX = 1/4WZ$. Find the coordinates of X .
- 4) Draw $\angle ABC$. Construct its angle bisector \overrightarrow{BD} . Construct $\angle EFG = 3(m\angle DBC)$.
- 5) Show algebraically that $(-2, -2)$, $(0, 3)$ and $(2, 8)$ are collinear.
A) What is the equation of the line through those points in slope-intercept form?
- 6) Graph $\triangle EFG$ with vertices $E(0, -4)$, $F(-4, -4)$, and $G(0, 2)$ translated by $(x, y) \rightarrow (x+2, y-1)$.
- 7) If B is between A and C , and $AB = 4x - 1$, $BC = 2x - 1$, and $AC = 5x$, solve for x and find the length of AC .
- 8) Construct the perpendicular bisector to \overline{AB} . (Make your own AB).
- 9) Find M , the midpoint of \overline{RS} , if $R(-4, 2)$ and $S(3, -1)$. Use the distance formula to verify that M is the midpoint.
- 10) Rays PQ and QR are perpendicular. Point S lies in the interior of $\angle PQR$. If $m\angle PQS = 4 + 7x$ and $m\angle SQR = 9 + 4x$, find $m\angle PQR$ and $m\angle SQR$.
- 11) An ice-resurfacing machine is used to smooth the surface of the ice at a skating rink. The machine can resurface 240 square yards of ice in one minute. About how many minutes does it take the machine to resurface a rectangular skating rink that is 230 feet long and 90 feet wide?
- 12) The measure of an angle's supplement is 44 less than the measure of the angle. Find the measure of the angle and its supplement.
- 13) $\triangle PQR$ has vertices $P(-1, 3)$, $Q(-3, -1)$, and $R(4, -1)$. Find the perimeter and area of $\triangle PQR$.
- 14) Write the coordinate rule for $\triangle JKL$ reflected about the y -axis. Write the coordinates for $\triangle J'K'L'$ if $J(2, 3)$, $K(6, 0)$, and $L(8, 7)$.
- 15) $\angle ABC$ and $\angle CBD$ are a linear pair. If $m\angle ABC = 3x^2 + 27$ and $m\angle CBD = x^2 + 72$, solve for x .