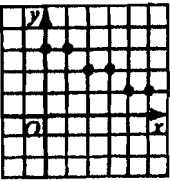
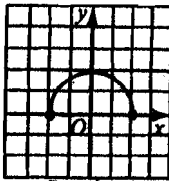
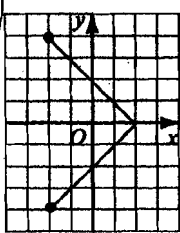
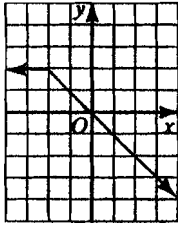


****Do these problems on the same paper as your textbook assignments.****

Textbook Section(s)	EXTRA PROBLEMS (use exact values—no rounding decimals—in answers)
2.1	<p>Specify the domain and range for each relation. Then tell whether or not it is a function.</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>1. </p> </div> <div style="text-align: center;"> <p>2. </p> </div> <div style="text-align: center;"> <p>3. </p> </div> </div> <p>Specify the domain for each relation:</p> <p>4. $\{(x, y) : y^2 = x\}$ 5. $\{(x, y) : xy = 1\}$</p> <p>6. If $f(x) = 1 - x^2$, find $f(3a + 2)$</p> <p>7. If $f(x) = mx + b$, and k is any nonzero number, find $\frac{f(x+k) - f(x)}{k}$.</p> <p>(review)</p> <p>Solve for x. Graph the solution.</p> <p>8. $18 + 5x + 2 = 4$ 9. $2\left \frac{3x-4}{5}\right - 15 > 39$ 10. $1 \leq 2x - 1 \leq 9$</p>
2.2 & 2.3	<p>1. Graph $\frac{x+1}{2} + \frac{y-1}{3} = 1$ using x- and y-intercepts.</p> <p>2. Find the value of k so that $P(2, -3)$ lies on the line $kx + 3y = k + 1$.</p> <p>3. Find k so that the line $kx + 2y = 6$ has slope $m = k + 1$.</p> <p>4. Find k so that the line through $(k, 3k)$ and $(k + 2, k + 4)$ has slope $m = k$.</p> <p>(review)</p> <p>5. Specify domain and range. Is it a function?</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  </div> <div style="text-align: center;"> <p>6. If x and y are integers, specify the range for $\{(x, y) : y = x \text{ and } x \leq 3\}$.</p> <p>7. If $g(x) = 1 - 2x$, find $g\left(\frac{1}{a^2 + 1}\right)$. Express answer as a fraction in simplest form.</p> </div> </div>

2.4	<p>1. Write the equation of a line, in standard form, that contains $\left(\frac{1}{2}, \frac{2}{3}\right)$ and $\left(1, \frac{1}{6}\right)$.</p> <p>2. Write the equation of a line, in standard form, that passes through $(3, 0)$ and the point of intersection for the lines $3x + 4y = 7$ and $x + 3y = 4$.</p> <p>3. If s varies directly as $2n - 1$, and $s = 9$ when $n = 2$, find n when $s = 15$.</p>
2.6	<p>Graph in the coordinate plane:</p> <p>1. $1 \leq x \leq 4$ 2. $y - 3 < 2$</p> <p>(review)</p> <p>3. Write the equation of a line, in slope-intercept form, that is the perpendicular bisector of the segment with endpoints $(-2, 4)$ and $(-6, 2)$.</p>
2.7	<p>(review)</p> <p>Graph in the coordinate plane:</p> <p>1. $5x \leq 12 - 2y$ 2. $x + 5 > 9$</p>
2.8	<p>(review)</p> <p>Graph in the coordinate plane:</p> <p>1. $x = y + 1$ 2. $y > x - 2$</p>