Answers to Review Test #4

1) Parallel
2) Neither
3) Perpendicular
4) $y = -2x$
5) $y = \frac{2}{5}x + \frac{38}{5}$
6) $y = \frac{1}{5}x + \frac{37}{5}$
7) $x = -2$
8) $y = -4$
9) $x = 5$
10) $x = 3$
11) See Graph
12) See Graph
13) See Graph
14) $y = \frac{2}{3}x - \frac{22}{3}$
15) $y = -\frac{1}{6}x + \frac{13}{3}$
16) $y = \frac{1}{4}x - \frac{17}{4}$
17) $x = 3$
18) $y = -\frac{3}{7}x + \frac{4}{7}$
19) $y = -\frac{5}{3}x + \frac{46}{3}$
20) $x = 4$
21) Angle A is a right angle.
22) If you play a clarinet, then you are a musician.
23) $AM = 24$ units
24) $HJ = 2$ units, $JK = 20$ units
25) $HJ = 57$ units, $JK = 3$ units
26) $x = 32$, $y = 64$
27) $x = 70$, $y = 32$

28)
\[ m\angle 1 = 60^\circ \]
Given
\[ m\angle 2 = 120^\circ \]
Given
\[ m\angle 1 + m\angle 2 = 60^\circ + 120^\circ \]
Addition Prop.
\[ m\angle 1 + m\angle 2 = 180^\circ \]
Simplify
\[ m\angle 1 \& m\angle 2 \text{ are supplementary} \]
Def. of suppl. $\angle s$
\[ a \parallel b \]
Converse Consec Int. $\angle s$ Theor.

29)
\[ a \parallel b \]
Given
\[ \angle 1 \cong \angle 3 \]
Corresp. $\angle s$ Post.
\[ m\angle 1 = m\angle 3 \]
Def. of cong.
\[ m\angle 2 + m\angle 1 = 180^\circ \]
Substi. Prop.
\[ m\angle 2 \& m\angle 3 \text{ are supplementary} \]
Def. of suppl. $\angle s$
\[ m\angle 2 + m\angle 3 = 180^\circ \]
Def. of linear pair
\[ \text{Linear pair} \]
Def. of linear pair
\[ \text{Def. of cong.} \]
Def. of suppl. $\angle s$
\[ \text{Def. of suppl. } \angle s \]
Def. of suppl. $\angle s$