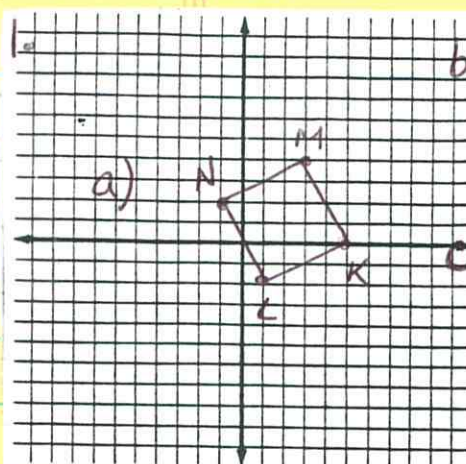


Geo

Ch6 Review



$$b) m_{\overline{NM}} = \frac{4-2}{3-1} = \frac{2}{2} = 1 \quad m_{\overline{MK}} = \frac{4-0}{3-5} = \frac{4}{-2} = -2$$

$$m_{\overline{KL}} = \frac{0-2}{5-1} = \frac{-2}{4} = -\frac{1}{2} \quad m_{\overline{NL}} = \frac{2-2}{-1-1} = \frac{0}{-2} = 0$$

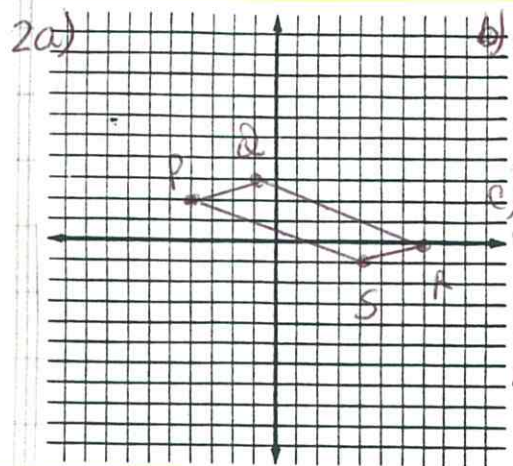
$$c) NM = \sqrt{(3-1)^2 + (4-2)^2} = \sqrt{4+4} = \sqrt{8} = 2\sqrt{2}$$

$$MK = \sqrt{(5-3)^2 + (4-0)^2} = \sqrt{4+16} = \sqrt{20} = 2\sqrt{5}$$

$$KL = \sqrt{(5-1)^2 + (0-2)^2} = \sqrt{16+4} = \sqrt{20} = 2\sqrt{5}$$

$$NL = \sqrt{(1-1)^2 + (2-2)^2} = \sqrt{0+0} = 0$$

d) KLMN is a square because opposite sides are $\parallel$, consecutive sides are $\perp$ and all 4 sides are $\cong$.



$$a) m_{\overline{PQ}} = \frac{3-2}{-1-4} = \frac{1}{-5} = -\frac{1}{5} \quad m_{\overline{QR}} = \frac{3-0}{-1-7} = \frac{3}{-8} = -\frac{3}{8}$$

$$m_{\overline{SR}} = \frac{0-1}{7-4} = \frac{-1}{3} = -\frac{1}{3} \quad m_{\overline{PS}} = \frac{2-1}{-4-1} = \frac{1}{-5} = -\frac{1}{5}$$

$$c) PQ = \sqrt{(-1-4)^2 + (3-2)^2} = \sqrt{25+1} = \sqrt{26}$$

$$QR = \sqrt{(7-3)^2 + (0-2)^2} = \sqrt{16+4} = \sqrt{20} = 2\sqrt{5}$$

$$SR = \sqrt{(7-4)^2 + (0-1)^2} = \sqrt{9+1} = \sqrt{10}$$

$$PS = \sqrt{(-4-1)^2 + (2-1)^2} = \sqrt{25+1} = \sqrt{26}$$

d) PQRS is a $\square$ because it has 2 pairs of opposite, $\parallel$ sides

$$3. 2x-7=x+1 \text{ (IT's } \cong \text{ sides)}$$

$$\begin{array}{r} -x \quad -x \\ x-7=1 \\ +7+7 \\ \hline x=8 \end{array}$$

$$AB = 2(8)-2 = 16-2 = 14$$

$$BC = 8+1 = 9$$

$$CD = 8-1 = 7$$

$$AD = 2(8)-7 = 16-7 = 9$$

$$4. 3m-5=m+3 \text{ (K's sides } \cong \text{)}$$

$$\begin{array}{r} -m \quad -m \\ 2m-5=3 \\ +5+5 \\ \hline 2m=8 \\ \frac{2}{2} \quad \frac{2}{2} \\ m=4 \end{array}$$

$$KL = 4+3 = 7$$

$$KN = 3(4)-5 = 12-5 = 7$$

$$LM = 4+2(5) = 4+10 = 14$$

$$NM = 5+9 = 14$$

$$t+9=m+2t$$

$$t+9=4+2t$$

$$-t \quad -t$$

$$9=4+t$$

$$\begin{array}{r} -4-4 \\ 9=4+t \\ \hline t=5 \end{array}$$

(4, 5)