

Honors Geometry

Review #2

$$1a) (25)(21)(29) = \boxed{15,225 \text{ m}^3}$$

$$b) \frac{15,225}{231} = 65.9 \quad \text{so he must buy 66 gallons}$$

$$2) V = Bh$$

$$\frac{680}{2\pi} = \frac{\pi r^2(2)}{2\pi} = r^2 = 108.23$$

$$r = 10.4 \quad \text{so } d = 20.8 \Rightarrow \boxed{21}$$

$$3) V_{\text{soft}} = \frac{4}{3}\pi(1.75)^3 \approx 22.45$$

$$\frac{448.92}{22.45} \Rightarrow \boxed{20}$$

$$V_{\text{BB}} = \frac{4}{3}\pi(4.75)^3 \approx 448.92$$

$$4) \frac{586,107}{97,100} = \boxed{6.04 \frac{\text{ppb}}{\text{mi}^2}}$$

$$5) \frac{4,028,977}{95,997} = \underline{41.97}$$

$$\frac{41.97}{6.04} = 6.95$$

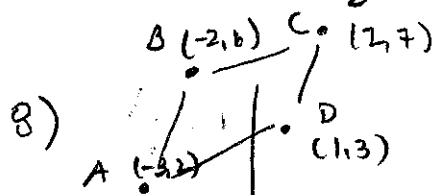
almost 7 times as dense.

$$6) \frac{7}{340} \approx 2\% \quad (.021)$$

$$7) \quad m_{\overline{AB}} = \frac{3}{3} = 1$$

$$m_{\overline{BC}} = \frac{-2}{2} = -1$$

Since these are opp reciprocals then $\overline{AB} \perp \overline{BC}$ meaning we have a right Δ .



$$8) \quad m_{\overline{BD}} = -1 \quad m_{\overline{AC}} = 1 \quad \text{This means } \overline{BD} \perp \overline{AC}$$

$$BD = \sqrt{9+9} = \sqrt{18}$$

$$AC = \sqrt{5^2+5^2} = \sqrt{50}$$

Since diagonals are \perp but not \cong the figure is a Rhombus but not a Square.

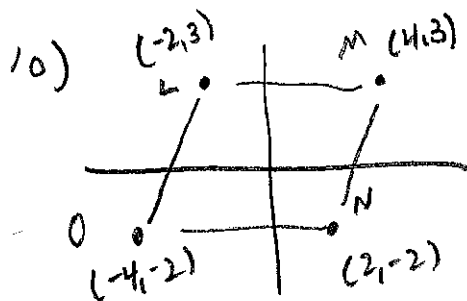
$$9) \quad m_{\overline{AB}} = 7$$

$$m_{\overline{BC}} = \frac{3}{4} \quad m_{\overline{AC}} = -\frac{4}{3} \quad \text{means } \perp \text{ lines}$$

$$AB = \sqrt{50}$$

$$BC = \sqrt{25} = 5 \quad AC = \sqrt{25} = 5 \quad \text{means } \cong$$

So ΔABC is isosceles Right.



$$m_{\text{opt } \overline{LN}} = (0, \frac{1}{2})$$

$$m_{\text{opt } \overline{OM}} = (0, \frac{1}{2})$$

Since midpoints are the same that means diagonals bisect each other therefore a para.

$$11) \quad x^2 + 4x + 4 + y^2 - 10y + 25 = 3 + \frac{29}{2}$$

$$r = \sqrt{32} \quad \text{Center } (-2, 5)$$

Find distance btwn $(-2, 5)$ and $(3, 2)$

$$\sqrt{25+9} = \sqrt{34} \quad \text{Since } \sqrt{34} > \sqrt{32} \text{ pt}$$

$$12) \quad 7 \text{ parts}$$

$$x: \frac{3}{7}(7) = 3 \quad (-6+3 = -3)$$

$$y: \frac{3}{7}(14) = 6$$

$$10+6 = 16$$

$$\boxed{(-3, 16)}$$