MATH LEAGUE 11TH WEEK SOLUTIONS:

1- CALCULATE THE AREA OF THE SHADED PART A:

$$A=2A_1+A_2$$

WHERE A_1 IS THE AREA OF A_2 RIGHT TRIANGLE WITH SIDES OF 5M AND 8M. WHERE A IS THE AREA OF A TRIANGLE WITH A BASE OF 6M AND A HEIGHT OF 12M.

$$A= 2\times\frac{5\times8}{2}+\frac{12\times16}{2}$$

$$A= 136\ M\text{^}2$$

-2 CALCULATE THE VOLUME IN YELLOW V:

$$V= V_1 - V_2$$

WHERE V_1 IS THE VOLUME OF THE CONE WHOSE BASE RADIUS IS 4M AND WHOSE HEIGHT IS 10M, AND V_2 IS THE VOLUME OF THE CONE WHOSE BASE RADIUS IS 2M AND WHOSE HEIGHT IS 5M.

$$V= \frac{\pi r_1^2 h_1}{3} - \frac{\pi r_2^2 h_2}{3}$$

$$V=\frac{3.14\times4^2\times10}{3} - \frac{3.14\times2^2\times5}{3}$$

$$V= 167.4-20.93$$

$$V=146.53m^3$$