

Name: _____

Week 8: June 1 – 5
Foundations of Math 11 Course Summary Assignment

Logical Reasoning Unit

1. Make a conjecture about the following evidence (1 mark):

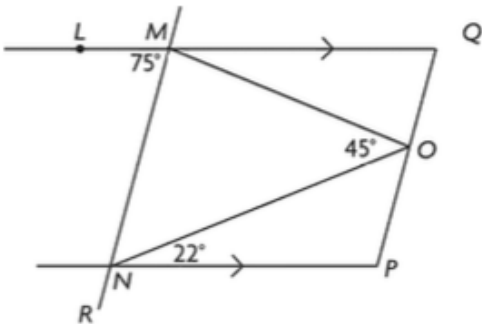
$$\begin{aligned}7 \times 6 &= 42 \\3 \times 10 &= 30 \\9 \times 12 &= 108\end{aligned}$$

2. Provide a counterexample to the statement “The coldest month of the year is January ” (1 mark)
3. Weight lifting builds. Muscle makes you strong. Strength improves balance. Inez lifts weights. What can be deduced about Inez? (1 mark)

Geometry Unit

4. Determine the measure of each interior angle of a regular 17 sided polygon. (2 marks)

5. Determine the measure of angle NMO



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Statistics Unit

6. A company that manufactures car batteries has a mean lifespan of 48 months and a standard deviation of 8 months.
- Sketch a normal distribution of the lifetime of the batteries. (4 marks)

 - What percentage has a lifespan between 40 and 72 months? (2 marks)

 - What percent has a lifespan less than or equal to 64 months? (2 marks)

Linear Inequalities Unit

7. Solve the following system of inequalities (8 marks)

$$2x + 3y \leq -9$$

$$2x - 3y \geq -3$$

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Quadratics Unit

8. Based on the following quadratic function, state the domain, range, x intercepts, y intercept, axis of symmetry, vertex, and provide a sketch. (7 marks)

a. $f(x) = x^2 + 5x + 6$

9. Solve the following quadratics by any method your prefer (3 marks each, 9 marks total):

a. $2x^2 + 8x - 4 = 1$

b. $2x^2 + 10x + 12 = 0$

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Finances Unit

10. You know it will cost you \$10,000 to travel to Europe for a summer. How much money do you need to invest right now to reach your goal if you plan to travel 5 years from now, with an interest rate of 14% compounded monthly.

11. How much interest is earned on a \$15,000 investment that earns 8% interest compounded daily over 4 years?

12. Kevin used his credit card to pay \$2544 for a holiday. The interest rate for the credit card is 18.75%, compounded daily. Kevin plans to make monthly payments of \$200.

13. When will Kevin have paid off the balance in full?