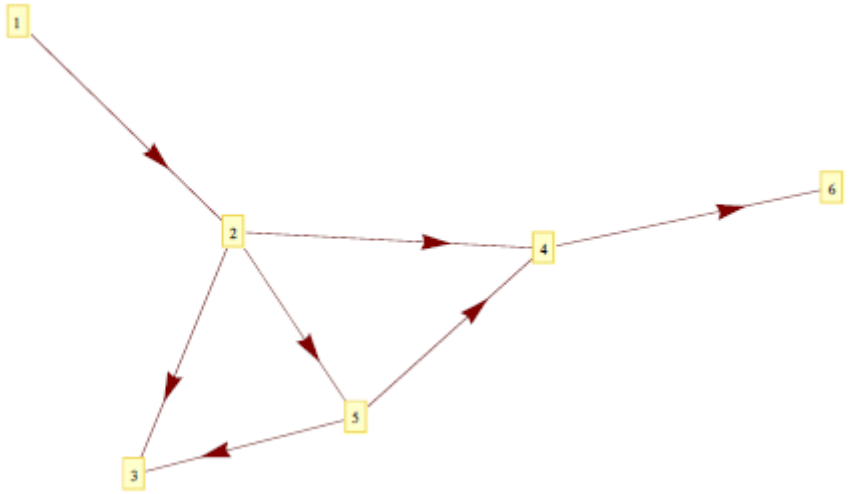
MATH 119 REVIEW FOR FINAL

1. In order to **see** the output of the following equation in Mathematica; what is required? 1+1/ 2*3;
2. Create a table whose variable is squared and has a minimum of 1 and maximum of 10?
3. What is the difference between an exact and approximate answer?
4. What is another way in mathematica of taking the $\sqrt{16}$?
5. How do I make comments in mathematica?
6. In order to get the roots of a polynomial what is the mathematica code used?
7. In order to factor a polynomial what is the mathematica code used?
8. What is the code to get the following plot?



Given the following code, what will be the **output**? GraphPlot[{NYC → London, London →Dubai, London→Milan, London→Moscow, Moscow→Dubai, Moscow→Milan, Milan→Bogota}, VertexLabeling→True, DirectedEdges→True]

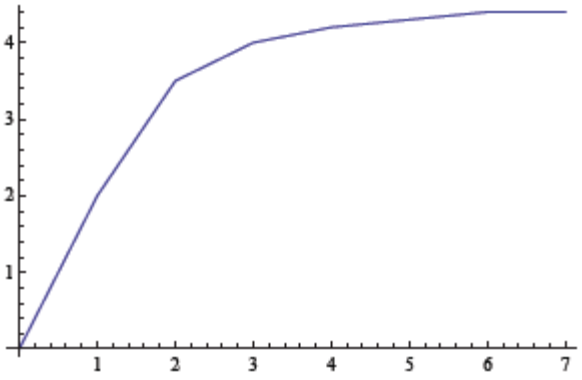
9. **Explain** why your output **cannot** be 10.25 and or -10.5. What are the minimum and maximum values for the following: Random [Integer, {-10, 10}]
10. **Explain** the following equation and give **output**: Range [-6, 8, 3]
11. What will be the output for this ?

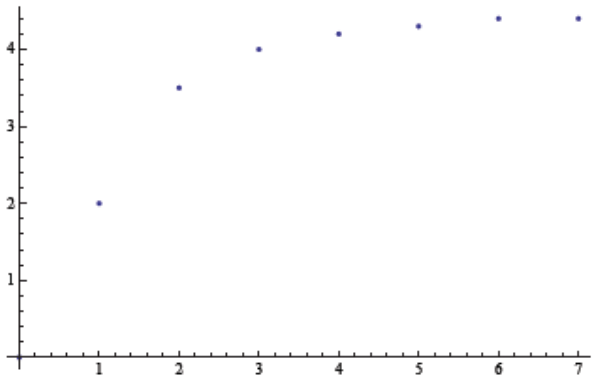
```
DateListPlot[FinancialData["AAPL", "January 10, 2009"],
Joined→True]
```

12. How do I graph a linear graph whose slope if 2/3 and y-intercept is 3?
13. How do I graph a circle whose radius is 5 and center is (2,3)?
14. How do I draw a parabola on mathematica?
15. How can I reflect a parabola over the x-axis mathematica?
16. How can I shift a parabola to the right 5 units?
17. How can I shift a parabola to the left 7 units?
18. How can I shift a parabola up 5 units?
19. How can I shift a parabola down 6 units?
20. How can I shift a parabola 5 units to the left, 6 units down and reflected over the x-axis?
21. Draw a square root mathematica?
22. I need a graph who has a linear equation of y=x, a parabola, and a square root in one graph?
23. Code for a random integer between 1 and 56?
24. A list of six random integers?

25.

Given the following two graphs what is the command needed to **dis**connect the dots.**Circle one answer**:



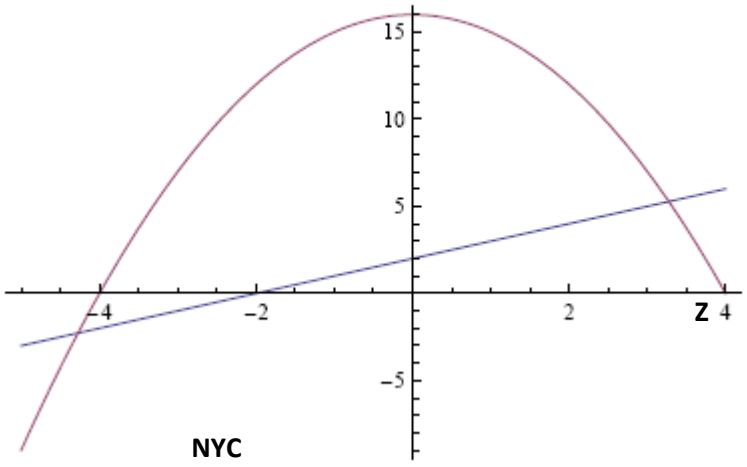


1. **A:** VertexLabeling→False **B:** PlotJoined→False **C:** DirectedEdges→True **D:** PlotGlue→False

26.

EXTRA CREDIT

```
Plot [{x + 2, -x^2 + 16}, {x, -5, 4}]
Dynamic [MousePosition["Graphics"]]
```



SCENARIO:

You work for NASA and an Asteroid (Z) is approaching the earth. It is calculated that its final impact will be (-2, 0) NYC.

What coordinates will you give the Air Force to neutralize threat; outside the earths atmosphere?