

Verse:

Name:

Period:

Date:

Math Analysis Worksheet
Graphs with Asymptotes or Holes

Graph:

1. $y = \frac{1}{x-5}$

2. $y = \frac{x^2 - 2x - 3}{x+1}$

3. $y = \frac{x^2 + 3x + 2}{x+2}$

4. $y = \frac{2}{x}$

5. $y = \frac{1}{3-x}$

6. (3.1)

Graph the following:

a) $f(x) = e^x + 2$

b) $g(x) = 3^{-x}$

c) $h(x) = -3^x$

7. (3.3)

Graph the following:

a) $f(x) = \ln x$

b) $g(x) = \log_2 x$

c) $h(x) = \log_2(x+1)$

8. (9.5)

Find the sum of the sequence:

a) 2, 4, 6, 8, ..., 70

b) 5, 15, 45, ..., 98415

9. (9.3 - Prob. Stations)

The maker of a popular chocolate candy that is covered in a thin colored shell has released information about the overall color proportions in its production of the candy, which is summarized in the following table.

Color	Brown	Red	Yellow	Green	Orange	Tan
Proportion	0.3	0.2	0.2	0.1	0.1	0.1

A single candy is selected at random from a newly opened bag. What is the probability that the candy has the given color(s)?

a) Brown or tan?

b) Red?

c) Not green?

d) Orange and yellow?

10. (3.3)

Evaluate the expression without using a calculator:

a) $\log 10^2$

b) $\ln e^3$

c) $\ln e^{-2}$

d) $\log 10^{-3}$

11. (3.4)

Assuming x and y are positive, use properties of logarithms to write the expression as a sum or difference of logarithms or multiples of logarithms.

a) $\ln(9y)$

b) $\log \frac{x^2}{\sqrt[3]{y}}$