

## C4L5 Notes

### The Graph of a Rational Function

To analyze the graph of a rational function:

**Step 1: Factor the numerator and denominator.**

**Step 2: Write the function in lowest terms.**

**Step 3: Find the domain of the rational function.**

**Step 4: State the vertical asymptote(s), if they exist.**

**Step 5: State the horizontal and oblique asymptote(s), if they exist.**

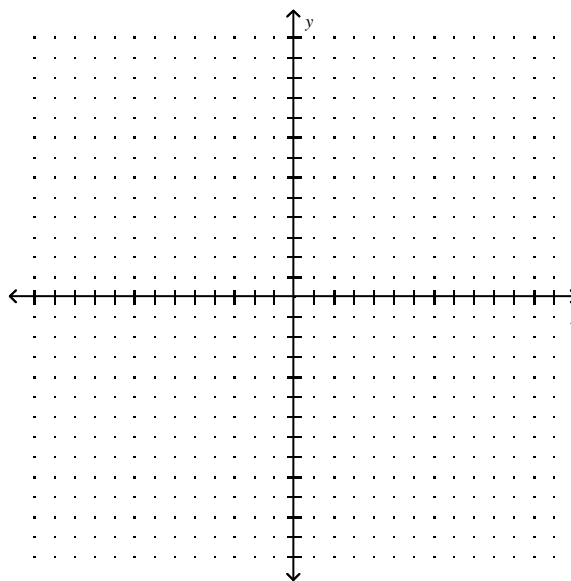
**Step 6: State the intercepts of the function.**

**Step 7: Find any necessary extra points**

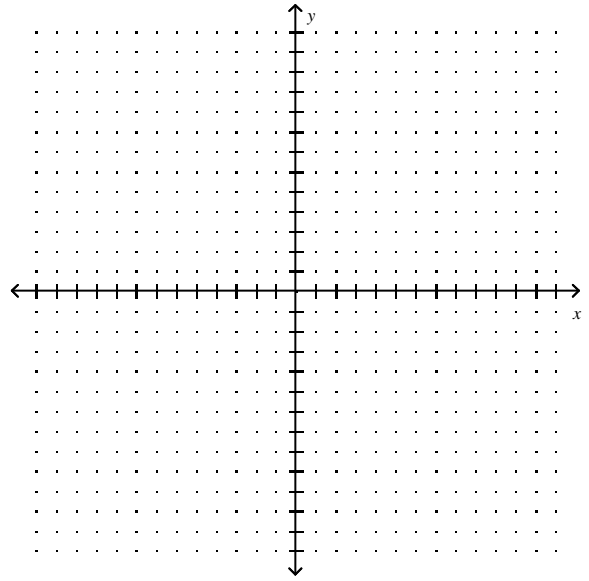
**Step 8: Graph by hand.**

Use the steps above to analyze the graph of each function.

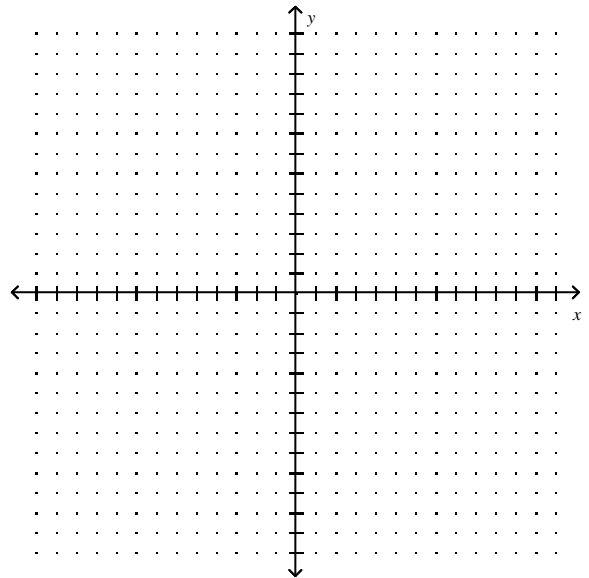
1.  $f(x) =$



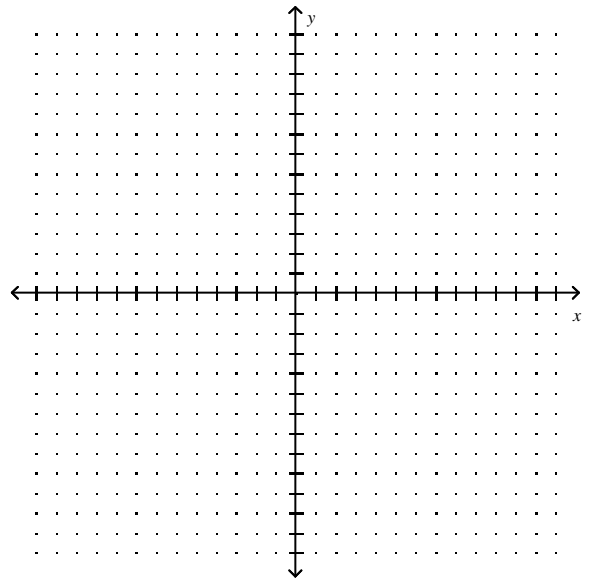
2.  $f(x) =$



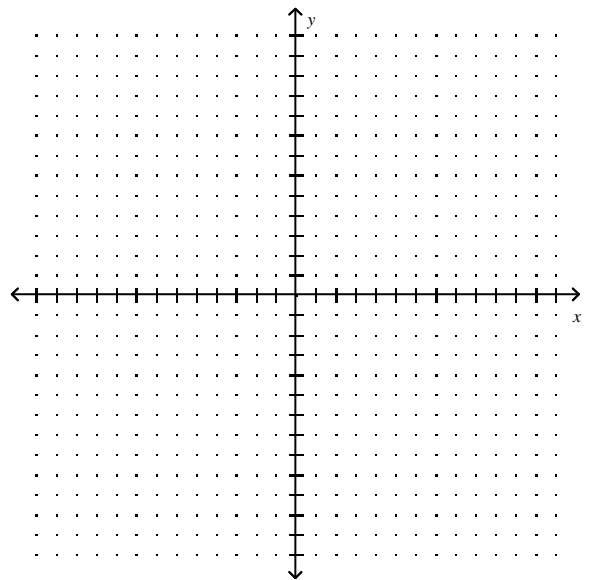
3.  $f(x) =$



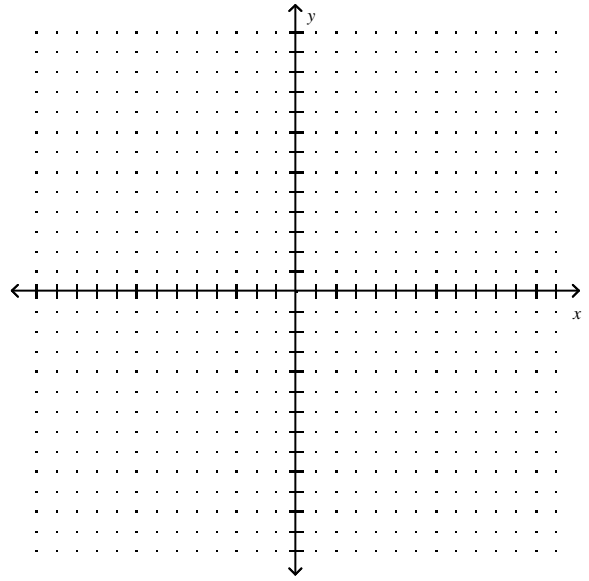
4.  $f(x) =$



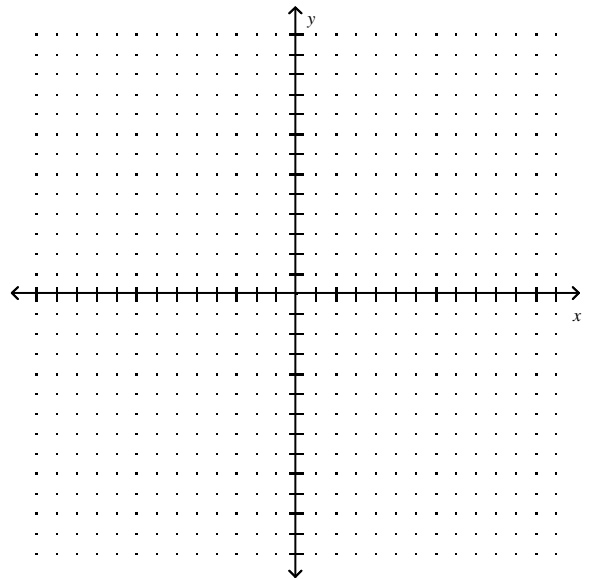
5.  $f(x) =$



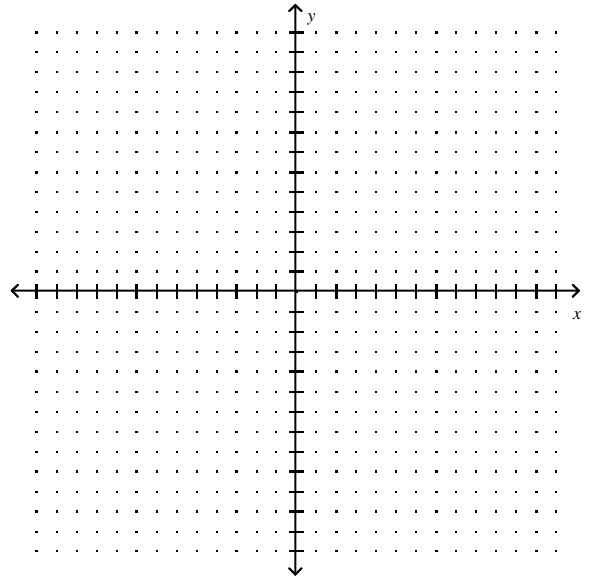
6.  $f(x) =$



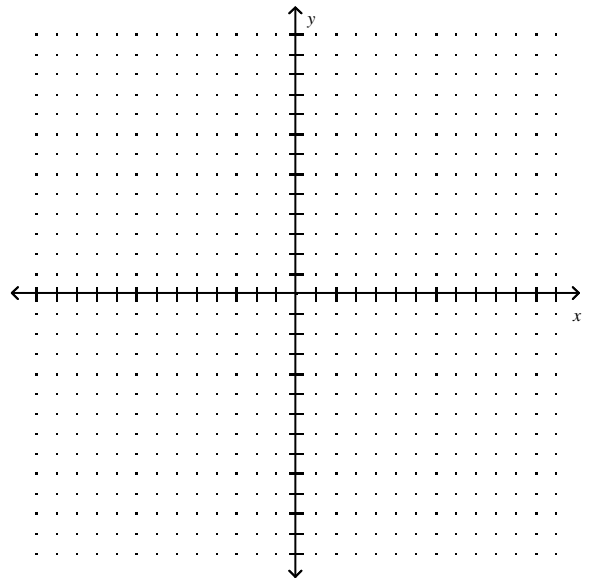
7.  $f(x) =$



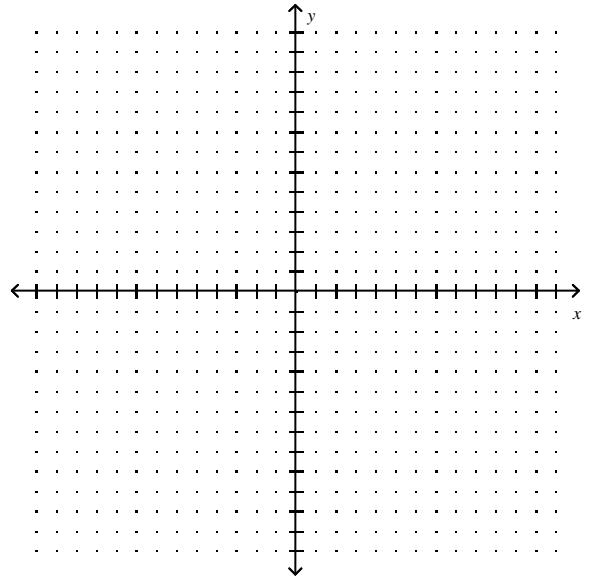
8.  $f(x) =$



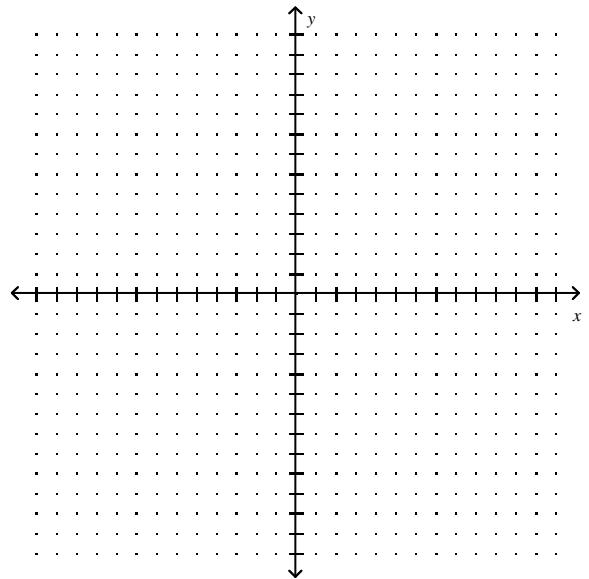
9.  $f(x) =$



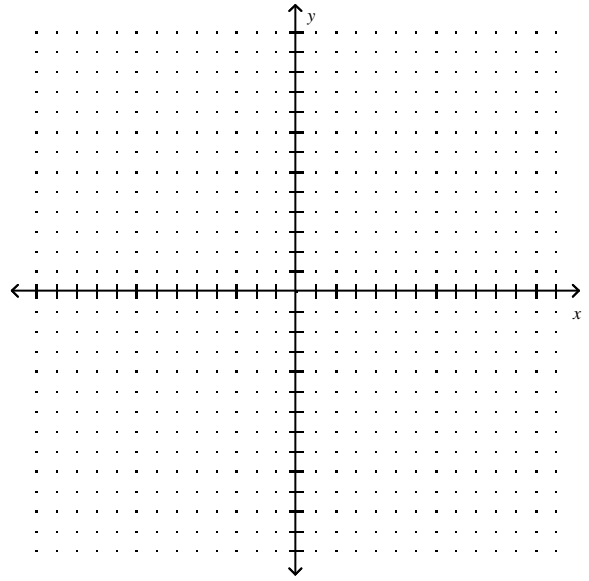
10.  $f(x) =$



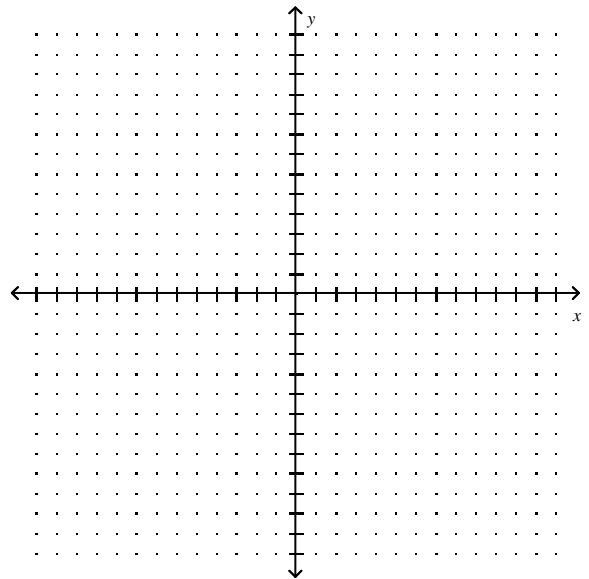
11.  $f(x) =$



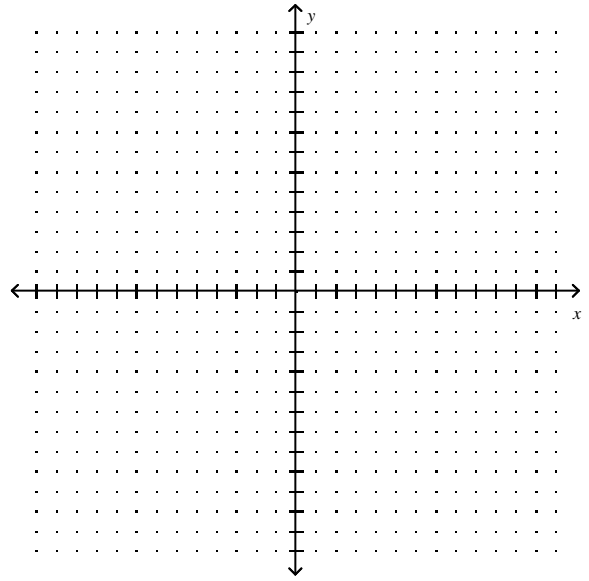
12.  $f(x) =$



13.  $f(x) =$



14.  $f(x) =$



15.  $f(x) =$

