Do your own work. SHOW your work. When in doubt about how stupid I am, assume the worst.

1. (5 pts) Simplify 
2. Multiply  
   1. (5 pts) 
   2. (5 pts) 
   3. (5 pts) 
3. (5 pts) Evaluate  if .
4. (5 pts) Factor 33462 into the product (of powers) of primes.
5. (5 pts) Simplify 
6. (5 pts) Write  in lowest terms. (You’ve done part of the work, already.)
7. (5 pts) Find the next term in the sequence.
   1. - 5, 3, 11, …
   2. - 100, 20, - 4, …
8. (5 pts) A store sells radios at a price, *p*. The store owner has found that the number of radios sold, *x*, is related to price by the following equation: . Give the equation for the revenue, *R*, entirely in terms of the price variable.
9. Factor.
   1. (5 pts) 
   2. (5 pts) 
   3. (5 pts) 
10. (5 pts) Solve the equation  for  *x*.
11. (5 pts) Add 
12. (5 pts) Convert 70 kilometers (km) per hour into units of miles per hour. (Hint: 2.54 cm 1 in, 5280 feet = 1 mi, 100 cm = 1 m, 1000 m = 1 km). This might take two lines, if you write as big as I do!
13. Simplify. Assume all variables represent nonzero real numbers. Your final answer should contain only positive exponents.
    1. (5 pts) 
    2. (5 pts) 
    3. (5 pts) 
    4. (5 pts) 
14. (5 pts) Consider the equation . Write the discriminant.



Bonus stuff. You can add up to 15 points to your score. I grade the first 15 points’ worth of attempts that I see.

1. Two-parter:
   1. (5 pts) What condition must the discriminant satisfy in order for to factor by ‘ac’ method?
   2. (5 pts) What condition must the discriminant satisfy in order for  to be a perfect square trinomial?
2. (5 pts) What’s the solution of the equation ?
3. (5 pts) Factor  into the product of two binomials.
4. (5 pts) Factor  into the product of two binomials.
5. (5 pts) Factor 
6. (5 pts) Factor , if possible.
7. (5 pts) Use Pascal’s triangle to expand 
8. (5 pts) Factor  (It doesn’t factor over the rationals! Your ‘ac’ method won’t work!).
9. (5 pts) What’s ?
10. (5 pts) Give an example of “Powers distribute over products.”
11. (5 pts) Give an example of “Products distribute over sums.”