Math 2423 homework

9. (2/1) Consider the function defined on the interval $[0, 2]$ by $f(x)$ by $f(x) = 0$ if $0 \le x < 1$ and $f(x) = 1$ if $1 \le x \le 2$. Partition the interval $[0, 2]$ into five equal subintervals. For this partition:

   1. Find a choice of the x_i^* that gives a Riemann sum equal to 0.8.
   2. Find two different choices of the x_i^* that makes it equal to 1.2.
   3. Find the largest and smallest Riemann sums for the partition that uses ten equal subintervals.

10. (2/1) 5.2 # 2, 17-20, 33, 35-40, 51-54

11. (2/1) 5.3 # 3-6, 8, 10-12

12. (2/1) 5.3 as many as needed of 19-34, including at least 31-34

13. (2/15) 5.3 # 43-44, 47-48, 52, 56, 59-60

14. (2/15) 5.4 # 2, 3, as many as needed of 5-14 including at least 12-14, as many as needed of 17-40 including at least 21-22, 27-29, 32-34, and 40

15. (2/15) 5.5 as many as needed of 7-32, including at least 24-30

16. (2/15) 5.5 as many as needed of 37-54, including at least 45, 46, 52-54

17. (2/15) 5.5 # 57, 58, 65

18. (3/6) 6.1 as many as needed of 5-26, including at least 19-24

19. (3/6) 6.1 # 28, 45, 46

20. (3/6) 6.2 as many as needed of 1-36, including at least 8-12, 15-18, 31-36

21. (3/6) 6.2 # 41-44, 48, 49, 52, 53, 61

22. (3/6) 6.3 as many as needed of 9-26, including at least 12, 14, 19-26

23. (3/6) 6.3 # 29-32, 46

24. (3/6) 6.5 # 6-10, 20, 23, 24