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3.
4. This may have been graded incorrectly. It takes 3 cuts to cut the pipe into 4 pieces, and 6 cuts to cut the pipe into 7 pieces. It takes $9 \div 3 = 3$ seconds to make one cut. Therefore to cut the pipe into 7 pieces, which is 6 cuts, it takes a total of $3 \times 6 = \boxed{18 \text{ seconds}}$.
5. This problem may have been graded incorrectly. From 1:15 PM to 8:35 PM we add up all the chimes. $1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 = 36$ chimes on the hours. It also chimes once at every half hour mark: 1:30, 2:30, 3:30, 4:30, 5:30, 6:30, 7:30, 8:30. That's 8 times for a total of $36 + 8 = \boxed{44}$.
6. The hour hand and the minute hand will overlap once every hour EXCEPT from 11 to 1 it only overlaps once. Therefore from 8:00 AM to 8:00 PM, the hour and minute hands will overlap $12 - 1 = \boxed{11}$ times.
7.
8.
9. Since the watch is 5 minutes late for every hour, every 60 minutes that pass on the watch is equivalent to 65 minutes in correct time. By 11:30 PM, 600 minutes have passed on the watch. This means that in correct time, $600 \times \frac{60}{65} = 650$ minutes have passed. This is the same as $650 \div 60 = 10\frac{5}{6}$ hours or 10 hours and 50 minutes. The correct time must be .
10.

