Kuta Software - Infinite Precalculus

Name_____

Partial Fraction Decomposition

Date_____ Period____

Find the partial fraction decomposition of each.

1) $\frac{-5x+4}{x^2-x}$

2) $\frac{3x+10}{x^2+9x+20}$

Matrix Inverses and Determinants

Evaluate each determinant.

3) $\begin{vmatrix} -1 & 2 \\ 1 & -4 \end{vmatrix}$

4) $\begin{vmatrix} 3 & 5 \\ -5 & -2 \end{vmatrix}$

5) $\begin{vmatrix} 3 & 3 & 1 \\ -3 & -1 & -3 \\ -4 & -3 & 1 \end{vmatrix}$

6) $\begin{vmatrix} -2 & 1 & -2 \\ 0 & 5 & -5 \\ 0 & 2 & -5 \end{vmatrix}$

7) A plane traveled 580 miles to Ankara and back. The trip there was with the wind. It took 5 hours. The trip back was into the wind. The trip back took 10 hours. Find the speed of the plane in still air and the speed of the wind.

8) Kayla's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 3 senior citizen tickets and 5 child tickets for a total of $70. The school took in $216 on the second day by selling 12 senior citizen tickets and 12 child tickets. Find the price of a senior citizen ticket and the price of a child ticket.

9) You are making flower arrangements to sell at a craft fair. Small arrangements are $8 and large ones are $12. You think you can sell 40 arrangements all together and need to make $400. How many of each type of arrangement do you need to bring to the craft fair?

10) Tickets for your school's play are $3 for students with ASB and $5 for students with no ASB.On opening night 937 tickets are sold and $3943 is collected. How many students had an ASB card and how many did not?

11) A theater group sold a total of 440 tickets for $3940. Each regular ticket costs $5, each premium ticket costs $15 and the elite tickets costs $25. The number of regular tickets was three times the number of premium and elite tickets combined. How many of each type of ticket were sold?

12) 15 band members from your school were selected to play in the state orchestra. Twice as many students who play a wind instrument were selected as students who play a string or percussion instrument. Of the students selected, ⅕ play a string instrument. How many students play each type of instrument were selected to play in the state orchestra.