

Intermediate Algebra 15% ~ about 9 out of 60

5. For all x in the domain of the function, this function $\frac{x+1}{x^3-x}$ is equivalent to:

J

F. $\frac{1}{x^2} - \frac{1}{x^3}$

G. $\frac{1}{x^3} - \frac{1}{x}$

H. $\frac{1}{x^2-1}$

J. $\frac{1}{x^2-x}$

K. $\frac{1}{x^3}$

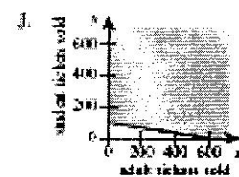
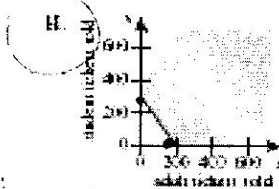
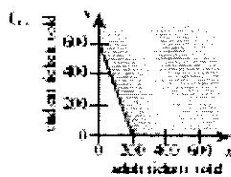
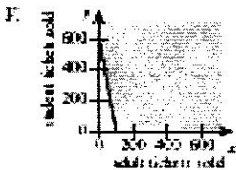
① Factor out the GCF. $\frac{x+1}{x(x^2-1)}$

② Factor x^2-1 . $\frac{x+1}{x(x+1)(x-1)}$

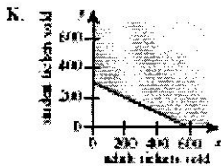
③ Cancel $x+1$ top & bottom. $\frac{1}{x(x-1)} = \frac{1}{x^2-x}$

Coordinate Geometry 15% ~ about 9 out of 60

6. Tickets for the Senior Talent Show at George Washington Carver High School are \$3 for adults and \$2 for students. To cover expenses, a total of \$600 must be collected from ticket sales for the show. One of the following graphs in the standard (x,y) coordinate plane, where x is the number of adult tickets sold and y is the number of student tickets sold, represents all the possible combinations of ticket sales that cover at least \$600 in expenses. Which graph is it?



$2y \geq 600$
 $\geq 0, y \geq 0$



$$\begin{array}{r} x \\ 0 \overline{) 300} \\ \underline{200} \\ 100 \end{array}$$

Plane Geometry 23% ~ about 14 out of 60

7. The parallel sides of the isosceles trapezoid shown below are 10 feet long and 16 feet long, respectively. What is the distance, in feet, between these 2 sides?

- A. 3
- B. 4
- C. 5
- D. 10
- E. 16



$3 + 10 + 3 = 16$

$5^2 = 3^2 + h^2$
 $25 - 9 = h^2$
 $16 = h^2$
 $h = 4$

8. In the figure below, line l is parallel to line m . Transversals t and u intersect at point A on l and intersect m at points C and B , respectively. Point X is on m , the measure of $\angle ACX$ is 130° , and the measure of $\angle BAC$ is 80° . How many of the angles formed by rays of l , m , t , and u have measure 50° ?

- A. 4
- B. 6
- C. 8
- D. 10
- E. 12

C

