review

November-12-13
2:42 PM

used 2009-3 + other stuff

Solve.

1. $\frac{x+4}{x-3} \geq \frac{x-5}{x+2}$

b) $\frac{1}{r-2} + \frac{1}{r^2-7r+10} = \frac{6}{r-2}$

2. The ratio of the surface area of a cylinder to the volume of the cylinder if the height remains at 10 cm is.

$R(x) = \frac{r+10}{5r}$.

a) Find the average rate of change as the radius increases from 2 cm to 5 cm.
b) Find the instantaneous rate of change when the radius is 8 cm.

3. The profit function for producing blank CD's was projected to be $P(x) = x^2 + 5x - 6$ where x is the number of CD's produced in hundreds. The average profit for a CD is found by $\frac{P(x)}{x}$. At what level of production must the company produce the CD's for the average profit to be greater than zero?

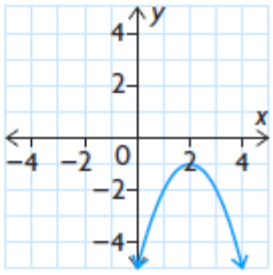
4. Sketch

a) $f(x) = \frac{2}{-3(x-2)} + 1$

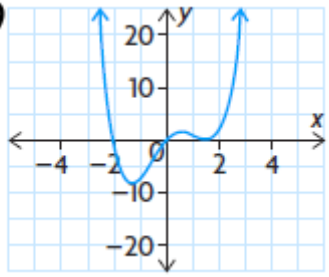
b) $y = \frac{x^2}{x-3}$

c) $y = \frac{x^2-9}{x-3}$

5. Sketch the Reciprocal



6.



6. Two pipes are used to fill the water for the swimming pool in the park. Pipe A can fill the pool alone in 5 hours, Pipe B can fill the pool alone in 4 hours. If Pipe A is turned on and 30 minutes later Pipe B is also turned on, how long will it take to fill the pool?

7. A passenger jet flew from Dallas, Texas to Germany and back. The return flight took 4 hours less than it took to go to Germany. The difference in flight time was caused by winds over the ocean which averaged 50 km/h only on the return trip. Assume there was no wind factor on the trip to Germany. The round trip(there and back) is 9900 km.

a) What was the average speed of the plane in still air?

b) How long did the round trip take?

8. It takes Frank 2 hours longer than Jane to carpet a certain type of room. Together they can carpet that type of room in $1\frac{7}{8}$ hours. How long would it take for Frank to do the job alone?