

Show all your work for full credit. Unsupported answers = reduced points. Write neatly in pencil please.

Solve the following equations:

1.      a)       $\frac{1}{x-1} + \frac{1}{x+2} = \frac{5}{4}$

b)       $2x^{1/2} + 3x^{-3/2} = 7x^{-1/2}$

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2.      A newspaper company has two printing machines. Printing machine B takes 7 minutes longer than to print 2000 papers than printer A. Together they can print 2000 copies in 12 minutes. Find the time for each printer to print 2000 papers if they print individually.

[      /3]

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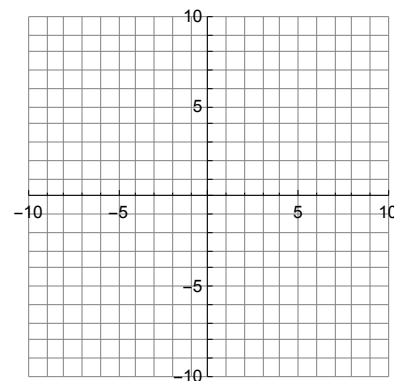
3. A small object is in the shape of a pyramid with a square base. Find the total surface area (including the bottom) and the volume given one side of the base is 6 inches and the height is 4 inches.

[ /3]

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4. Solve the inequality:  $\frac{x^2-2x-3}{x^2-x-6} \leq 0$

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5. Find the center and radius of the circle:  $x^2 + y^2 + 10x - 4y - 13 = 0$ . Graph the circle; find and label (with coordinates) any x or y intercepts.



[ /3]