Friday Flashback #4

1. A museum purchases a painting for $15000. The painting increases in value each year by 10%. What is the value after 10 years?

2. The length of the initial swing of pendulum is 90 cm. Each successive swing decreases by 30%. If the process continues forever ... how far will it swing?

3. Given $y=2x^2 + 6x + 11$ Write in vertex form. Determine, vertex, axis of symmetry, x intercept, y intercept, minimum or maximum, domain, range

4. Factor: $0.5x^2 - 3x$ $3x^3-11x^2+6x$

   $2x^4-14x^2+12$ $(2x+3)^2 - (4x-1)^2$
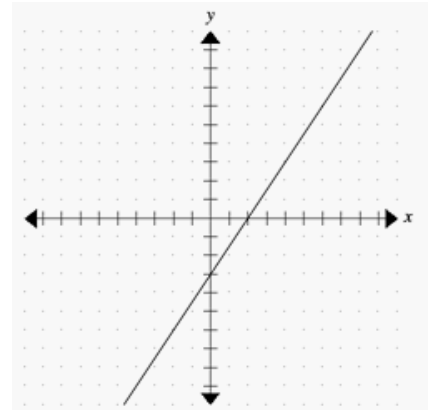
5. How many x-intercepts (roots) does $y=x^2+x+9$ have?

6. Convert to mixed radicals: $\sqrt{52a^2}$ $\sqrt{a^6b^3c}$

7. Simplify: $\dfrac{2}{\sqrt{a}}$ $\dfrac{3+\sqrt{2}}{5-\sqrt{x}}$

8. Solve. State the restrictions $\sqrt{5x+2} - 3 = 1$

9. Sketch the graph of the reciprocal function for the given line. State the equation for the asymptotes.

10. Solve and graph each of the following questions

    $|x-5| = 3x+1$