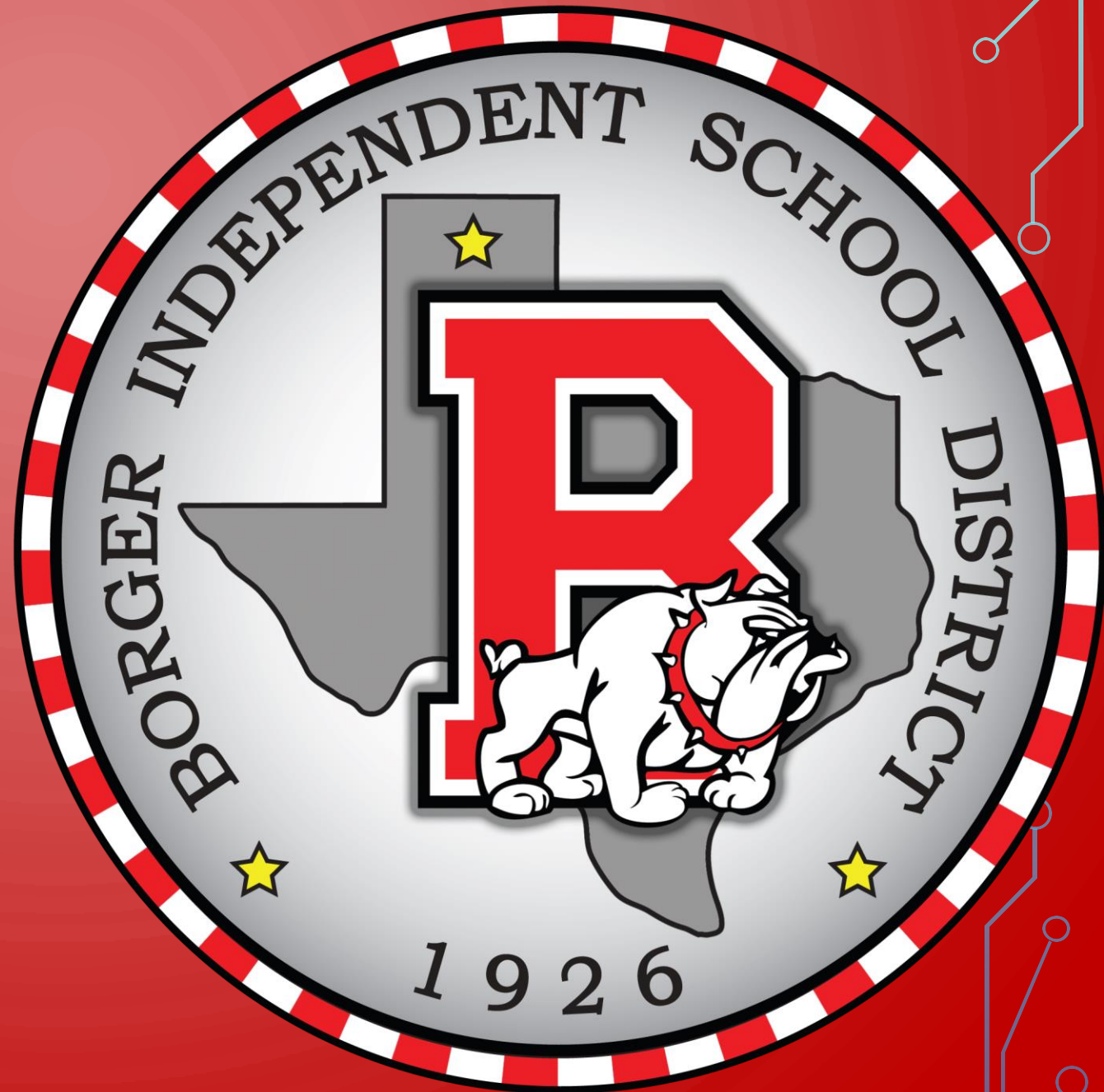


# BOARD NOTES

13 FEBRUARY 2020

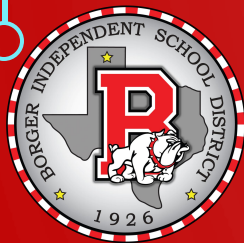




2A.5 (D) solve exponential equations of the form  $y = ab^x$  where  $a$  is a nonzero real number and  $b$  is greater than zero and not equal to one and single logarithmic equations having real solutions;

2A.5 (E) determine the reasonableness of a solution to a logarithmic equation.

We will be able to model exponential equations (exponential growth and decay: compound interest and depreciation).



### WHAT WE NEED:

- TI-84
- Laws of Exponents
- Definition of Exponential
- Compound Interest Formula

### I WILL BE ABLE TO COMPLETE MY HOMEWORK GIVEN THE

- Equation



$$A = P \left( 1 + \frac{r}{n} \right)^{nt}$$

$$6.5\% \rightarrow .065$$

$$\# (\#)^x$$

**Cooperative Team Problem Solving** - Students will demonstrate responsibility with others in order to identify, solve, and prevent problems. They will respect and understand the contributions to diverse cultures.

**Model Thinker** - Students will have basic knowledge of politics, world events, foreign affairs, and geography. They will be aware of current events and be able to analyze and make informed decisions to those affecting the national and international scene.

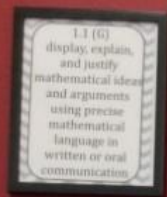
**Risk Taker with Entrepreneurial Spirit** - Students will be able to think critically, analyze situations, gain insight, and take calculated risks to achieve goals and objectives. They will be able to manage the responsibility for their actions, understand and have the confidence to take and act independently.

**Professional Technology User** - Students will use technology as a tool to research, identify, and compare people and situations. They will demonstrate knowledge of computers, internet, software applications, and the effective use of technology.

**Contributing Citizen** - Students will contribute energy, time, and talent to improve the quality of themselves and others. They will display a deep awareness of their community and be personally responsible for their actions.

**Learning Objectives**

1. Identify the components of a problem.	1. Identify the components of a problem.
2. Analyze the components of a problem.	2. Analyze the components of a problem.
3. Synthesize the components of a problem.	3. Synthesize the components of a problem.
4. Evaluate the components of a problem.	4. Evaluate the components of a problem.
5. Create a solution to a problem.	5. Create a solution to a problem.
6. Implement a solution to a problem.	6. Implement a solution to a problem.
7. Monitor and evaluate the solution to a problem.	7. Monitor and evaluate the solution to a problem.
8. Communicate the solution to a problem.	8. Communicate the solution to a problem.
9. Reflect on the solution to a problem.	9. Reflect on the solution to a problem.
10. Apply the solution to a problem.	10. Apply the solution to a problem.



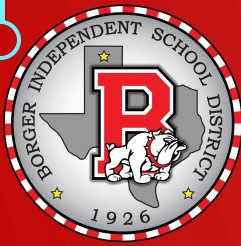
$$A = ? \quad \$664.14$$
$$P = 500$$
$$r = .095$$
$$n = 12 \text{ (MONTHLY)}$$
$$t = 3$$

$$A = ? \quad \$231.50$$
$$P = \$150$$
$$r = .075$$
$$n = 1$$
$$t = 1994 - 1988 = 6$$

$$A = \$5000$$
$$P = ? \quad \$1915.44$$
$$r = .065$$
$$n = 2 \text{ (SEMI-ANNUALLY)}$$
$$t = 15$$

$$5000 = P \left( 1 + \frac{.065}{2} \right)^{2 \cdot 15}$$





A ?

\$6400

$$P = 12,500$$

$$r = .2$$

$$n = 1$$

$$t = 3$$

$$A = P\left(1 - \frac{r}{n}\right)^{nt}$$

