SM2 8.R Test Remediation Packet Name _____ Period _____

8.1 Properties of Exponents	Do this section is you got lower than 84 on Rules of Exponents.
Simplify using the properties of Exponents. Remember, positive exponents. 1. $x^3 \cdot x^5$ 2. $(3x^2)^{-4}$ 3. $\frac{y^4}{y^7}$ 4. $-9x^0$	Simplify using the properties of Exponents. Remember, positive exponents. 5. $\left(\frac{16x^4y^{-3}}{2^6y^5}\right)^{\frac{1}{2}}$ 6. $\frac{j^{\frac{1}{4}}k^{\frac{7}{3}}}{j^{\frac{5}{4}}k^{-\frac{5}{3}}}$
7. Write $\sqrt[3]{x^5}$ in exponent form.	8. Write $x^{\frac{4}{5}}$ in radical form.
9. Write $y^{-\frac{3}{2}}$ in radical form.	Simplify the following. 10. $64^{\frac{2}{3}}$ 11. $32^{\frac{3}{5}}$
Review	Do this section if you scored lower than a 52 on Review section.

12. What is the product of $x^2 + 4x - 5$ and $-3x + 6$

13. Factor the following equation:
$4x^2 - 9x + 5$

14. Simplify the following expression
$(-4 + \sqrt{-36})(2 - \sqrt{-9}) - 2(5 + \sqrt{-64})$

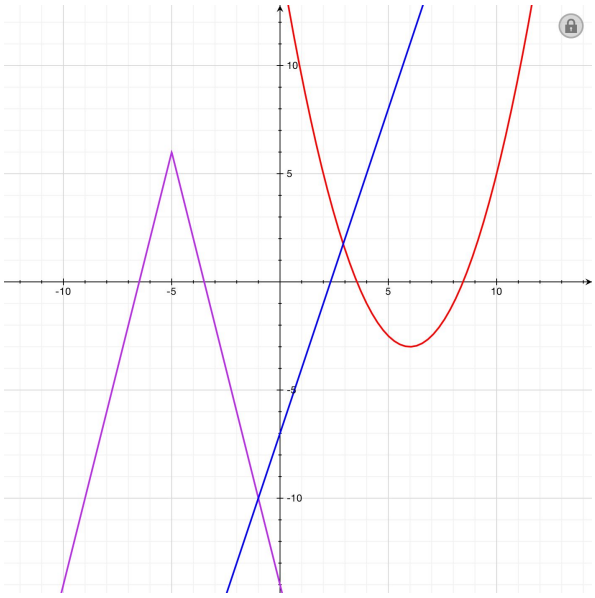
15. Solve the following equation using the quadratic formula $y = 2n^2 + 4n - 9$

16. Write the equations of the given graphs to the right.

Equation A (Absolute Value):

Equation B (Quadratic):

Equations C (Linear):



Exponentials

Do this section is you got lower than 77 on Exponentials.

17. What will be the balance of an account of $5,000 if it is earning 5.2% interest after 13 years?

A) $2539.50

B) $5289.11

C) $9815.64

D) $11528.42

18. A Simple interest account is Linear or Exponential?
A compounded account is Linear or Exponential?

A growth FACTOR needs to be _____

A Decay FACTOR needs to be _____

19. Find the Equation for the following:

Years	Population of Rare Bird
0	500
1	425
2	361
3	307

Exponential EQUATION for this Situation:

Is this Decay or Growth?

What is the Decay/Growth RATE?

20. The Population growth of a city can be modeled by the equation $P = 250(1.047)^t$
population in thousands
and t is years since 1995. In what year does the model predict that the city reaches a population of approximately 556,000 people?
A. 2012 B. 2014
C. 2016 D. 2018

21. Matching: Match the equation with the type of equation it is. Start is 200 mg. Rate is $\pm 8\%$.

		A. $y = 200(1 + \frac{.08}{52})^{52t}$
1. Annual Decay		B. $y = 200 + 200(.08)t$
2. Annual Growth		C. $y = 200e^{.08t}$
3. Simple Interest		D. $y = 200(0.92)^t$
		E. $y = 200(1.08)^t$
		F. $y = 200e^{-.08t}$