

Math 1 Reflection Sheet

Name: _____ Date: _____ Week #: _____

Assignments	Grade	Comments

Date	Class work	Homework (must write in planner as well)
Monday		
Tuesday		
Wednesday		
Thursday		
Friday		

******Students must complete their homework daily, 100%; the consequence = silent lunch daily******

Parent Signature: _____

Essential Questions	Answers
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

Name: _____ Date: _____ Week: _____

"Warm-up's Q1W4"

Monday Warm-up

Solve.

$$(-2) + (-9) =$$

$$(-18) + (-6) =$$

$$(-21) + (-38) =$$

$$(-15) + (-20) =$$

$$(-11) + (-12) =$$

$$(-7) + (-4) =$$

$$(-19) + (-5) =$$

$$(-7) + (-2) =$$

Show all your work

Tuesday Warm-up

8.NS.2

Estimate the irrational number to the nearest whole number.

a. $\sqrt{13}$

b. $\sqrt{103}$

c. $\sqrt{420}$

Show all work here

Wednesday Warm-up

(8.EE.1)

What is the value of the following expression?

$$\frac{(3^3)^4}{(3^5)(3^2)}$$

Show all work here

Thursday Warm-up

Solve. $\frac{1}{3} + -3\frac{1}{8}$

Name _____

Date _____ Period _____

Simple and Compound Interest

Use simple interest to find the ending balance.

- 1) \$34,100 at 4% for 3 years
- 2) \$210 at 8% for 7 years
- 3) \$4,000 at 3% for 4 years
- 4) \$20,600 at 8% for 2 years

Finding Percent Change

Find each percent change. Round to the nearest tenth of a percent. State if it is an increase or decrease.

- 1) From 82 to 38
- 2) From 75 to 45

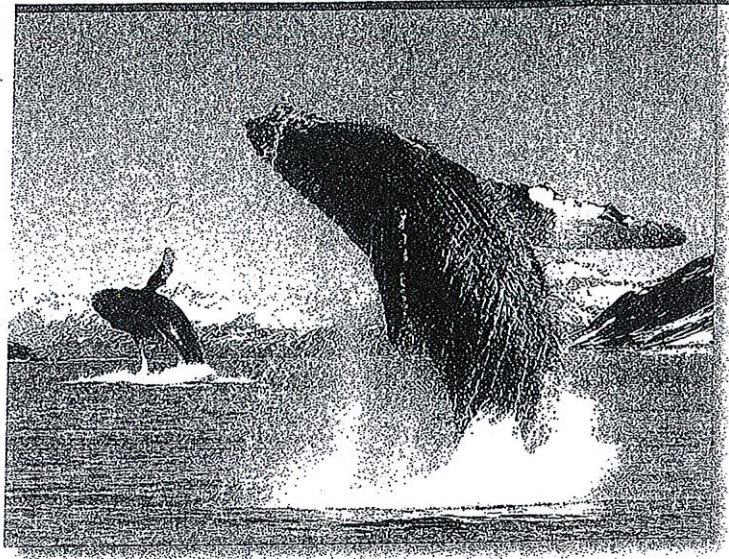
Distance - Rate - Time Word Problems

- 1) An aircraft carrier made a trip to Guam and back. The trip there took three hours and the trip back took four hours. It averaged 6 km/h on the return trip. Find the average speed of the trip there.
- 2) A passenger plane made a trip to Las Vegas and back. On the trip there it flew 432 mph and on the return trip it went 480 mph. How long did the trip there take if the return trip took nine hours?
- 3) A cattle train left Miami and traveled toward New York. 14 hours later a diesel train left traveling at 45 km/h in an effort to catch up to the cattle train. After traveling for four hours the diesel train finally caught up. What was the cattle train's average speed?
- 4) Jose left the White House and drove toward the recycling plant at an average speed of 40 km/h. Rob left some time later driving in the same direction at an average speed of 48 km/h. After driving for five hours Rob caught up with Jose. How long did Jose drive before Rob caught up?

The Whale Tale In 1986, the International Whaling Commission declared a ban on commercial whale hunting to protect the small remaining stocks of several whale types that had come close to extinction.

Scientists make census counts of whale populations to see if the numbers are increasing. While it's not easy to count whales accurately, research reports have suggested that one population, the bowhead whales of Alaska, was probably between 7,700 and 12,600 in 2001.

The difference between whale births and natural deaths leads to a natural increase of about 3% per year. However, Alaskan native people are allowed to hunt and kill about 50 bowhead whales each year for food, oil, and other whale products used in their daily lives.



- 6 Assume that the 2001 bowhead whale population in Alaska was the low estimate of 7,700.
- What one-year change in that population would be due to the difference between births and natural deaths?
 - What one-year change in that population would be due to hunting?
 - What is the estimate of the 2002 population that results from the combination of birth, death, and hunting rates?
- 7 Use the word *NOW* to stand for the Alaskan bowhead whale population in any given year and write a rule that shows how to estimate the population in the *NEXT* year.
- 8 Which of the following changes in conditions would have the greater effect on the whale population over the next few years?
- decrease in the natural growth rate from 3% to 2%, or
 - increase in the Alaskan hunting quota from 50 to 100 per year

Check Your Understanding

The 2000 United States Census reported a national population of about 282 million, with a birth rate of 1.4%, a death rate of 0.9%, and net migration of about 1.1 million people per year. The net migration of 1.1 million people is a result of about 1.3 million immigrants entering and about 0.2 million emigrants leaving each year.

- Use the given data to estimate the U.S. population for years 2001, 2005, 2010, 2015, 2020.
- Use the words *NOW* and *NEXT* to write a rule that shows how to use the U.S. population in one year to estimate the population in the next year.
- Write calculator commands that automate calculations required by your rule in Part b to get the U.S. population estimates.
- Modify the rule in Part b and the calculator procedure in Part c to estimate U.S. population for 2015 in case:
 - The net migration rate increased to 1.5 million per year.
 - The net migration rate changed to -1.0 million people per year. That is, if the number of emigrants (people leaving the country) exceeded the number of immigrants (people entering the country) by 1 million per year.

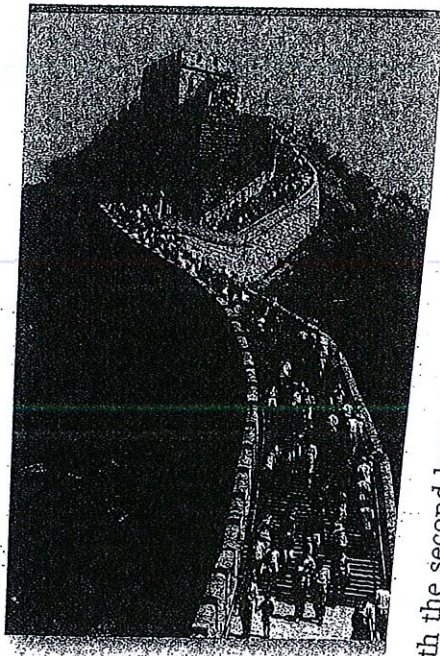


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Applications

1 The People's Republic of China is the country with the largest population in the world. The population of China in 2005 was approximately 1.3 billion. Although families are encouraged to have only one child, the population is still growing at a rate of about 0.6% per year.

- Estimate the population of China for each of the next 5 years and record your estimates in a data table.
- When is it likely that the population of China will reach 1.5 billion?
- How would your prediction in Part b change if the growth rate were 1.2%, double the current rate?
- Using the word *NOW* to stand for the population in any year, write rules that show how to calculate the population in the *NEXT* year:
 - if the growth rate stays at 0.6%.
 - if the growth rate doubles to 1.2%.

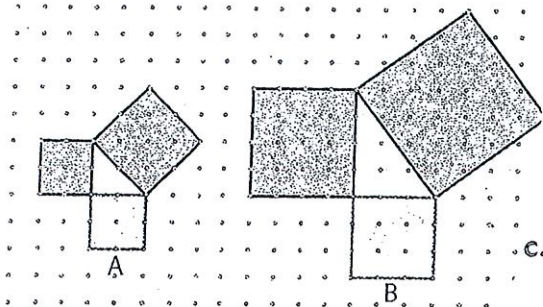


2 The country with the second largest population in the world is India, with about 1.1 billion people in 2005. The birth rate in India is about 2.2% per year and the death rate is about 0.8% per year.

- Estimate the population of India for each of the next 5 years and record your estimates in a data table.
- When is it likely that the population of India will reach 1.5 billion?
- How would your prediction in Part b change if the birth rate slows to 2.0%?
- Using the word *NOW* to stand for the population in any year, write rules that show how to calculate the population in the *NEXT* year:
 - if the birth rate stays at 2.2%.
 - if the birth rate slows to 2.0%.

In figures A and B, squares are built on each side of a right triangle.

$\square = 1$ square unit



- ii. Find the area of each of the squares. How are the areas of the squares related in this case?
 - iii. Find the perimeter of the triangle.
- c. How is the work you did in Parts a and b related to the Pythagorean Theorem?

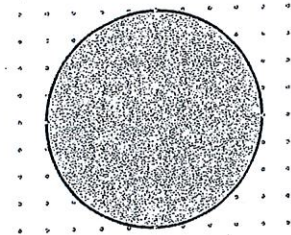
For figure A:

28 Consider the circle drawn below.

i. Find the area of the triangle.

$\square = 1$ square unit

ii. Find the area of each square. How are the areas related?



iii. Find the perimeter of the triangle.

For figure B:

i. Find the area of the triangle.

- a. Use the dot grid to find the approximate area of the circle.
- b. Use the formula $C = 2\pi r$ or $C = \pi d$ to find the circumference of the circle.
- c. Use the formula $A = \pi r^2$ to find the area of the circle.
- d. In what kind of unit is area measured? How can you use this fact to avoid confusing the formulas $2\pi r$ and πr^2 when computing area of a circle?

c. $-5^2 - (3 - 5)$
 f. $|-5| + 15 - |5 - 3|$

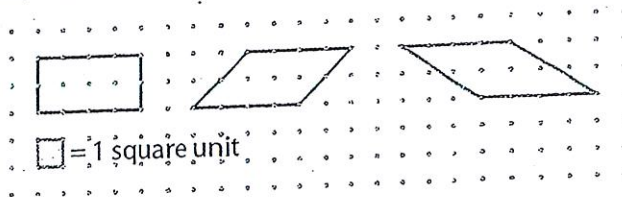
29 The population of India is about 1.1 billion people. Suppose the population of country X is 1.1 million, and the population of country Y is 11 million.

Find the value of each expression.

a. $4 \cdot 2 - 3$
 b. $2(-5) + 2(3)$
 d. $(-3)(2)(-5)$
 e. $-5 + 2 + 10 + (-5)^2$

- a. How many times larger is the population of India than that of country Y? Than that of country X?
- b. What percent of the Indian population is the population of country Y? Is the population of country X?

30 Consider the three parallelograms shown below.



- a. Rachel thinks that all three parallelograms have the same area. Is she correct? Explain your reasoning.
- b. Sketch a parallelogram, different from those above, that has an area of 8 square units.

31 Place the following numbers in order from smallest to largest.

2.25 2.05 -2.35 -2.75 0 2.075

Review