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## Review Packet - Alternate Assignment

## Do every problem. Show all work for each problem!

1) Which set of ordered pairs represents a function?
(A) $\{(0,0),(0,1),(0,2),(0,1)\}$
(B) $\{(0,0),(1,1),(1,-1),(4,2)\}$
(c) $\{(0,2),(1,2),(2,2),(3,2)\}$
(D) $\{(1,2),(3,4),(1,4),(3,2)\}$
2) Derrick and Mary are tutors. The equation shows Derrick's rate and the table shows Mary's rate. What is the difference between Derrick's and Mary's hourly rate? Derrick's Tutoring Rate
$y=15 x$

## Mary's Tutoring Rate

| Hours of Tutoring, $\boldsymbol{x}$ | Pay, $\boldsymbol{y}$ |
| :---: | :---: |
| 3 | $\$ 75$ |
| 5 | $\$ 125$ |
| 7 | $\$ 175$ |
| 9 | $\$ 225$ |

3) Five students started the month with a specific amount of money they could each spend. The money each student spent during the month is represented in the graphs and tables below.





| Day | \$ Remaining |
| :---: | :---: |
| 0 | 40 |
| 5 | 34 |
| 10 | 28 |
| 15 | 22 |
| 20 | 16 |
| 25 | 10 |
| 30 | 4 |
| $V$ |  |

Put the names of the graphs, tables, and equations in the blanks to order the students' rates of spending from least to greatest.
Lowest rate $\rightarrow$ Highest rate
4) According to the US Census Bureau, as of April 1, 2000, the total population of the United States was about $3 \times 10^{8}$. The population of Vermont was about $6 \times 10^{5}$. The population of the United States was how many times the population of Vermont in April 2000?
6) Rhombus KLMN, shown on the grid, rotates $90^{\circ}$ counterclockwise around the origin. Then it translates 6 units down. Draw the image of KLMN.

7) A triangle is shown. Use the grid to create the image of the triangle after it is reflected over the $y$-axis and then dilated about the origin by a scale factor of 2 .

8) Select all the numbers that are irrational.

A $\sqrt[3]{16}$
(B) $\sqrt{25}$
c) $\sqrt[3]{64}$
(ㅁ) $\sqrt{168}$
( $\sqrt[3]{27}$
9) Figure $R S U V$ is a square and triangle $S U T$ is a right triangle.


If the measure of angle $S T U$ is $31^{\circ}$, what is the measure of angle $R S T$ ?
(A) $59^{\circ}$
(B) $90^{\circ}$
c) $121^{\circ}$
(D) $149^{\circ}$
11) Equation P: $2(x+5)+3 x=5 x+5$

Equation $Q: 4 x+8-3 x=5-2 x+3+3 x$
Which of the following is true?
A) Equation $P$ has no solution and equation $Q$ has one solution.
B) Equation $P$ has no solution and equation $Q$ has infinite solutions.
C) Equation $Q$ has no solution and equation $P$ has infinite solutions.
D) Both equations have infinite solutions.
13) Find the total volume. Round to the nearest tenth.

15) A sample of middle schoolers, was surveyed about which type of music they prefer - pop music or rock music. The results are given in the frequency table below.

|  | Pop | Rock | Total |
| :--- | :---: | :---: | :---: |
| $7^{\text {th }}$ graders | 50 | 45 |  |
| $8^{\text {th }}$ graders | 50 | 75 |  |
| Total |  |  |  |

Who was more likely to choose pop: $7^{\text {th }}$ or $8^{\text {th }}$ graders? Justify your reasoning.
16) Find as many pairs of angles as you can that MUST be congruent, and explain why.


