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## TNReady Mixed Skills Review

1) Explain, in words, the differences in graphing the following equations: $y=3 x+5, y=\frac{1}{3} x+5, y=-\frac{1}{3} x+5$. Then graph them all on the coordinate plane.

2) Harold baked some cookies, then brought them to a potluck. The cookies were eaten at a constant rate. After 10 minutes, there were 40 cookies left. After 14 minutes, there were 24 cookies left.
a) How many cookies were eaten per minute?
b) How many cookies were there on the tray originally?
c) Use your answers for $a \& b$ to write an equation in slope-intercept form. Identify what $x$ and $y$ represent in your equation.
$3)$ Is this a function? Explain why or why not. $(5,10) ;(6,13) ;(7,13) ;(8,15)$
3) When is a decimal rational, and when is it irrational? Explain in words. Give examples.
4) When is a square or cube root rational, and when is it irrational? Explain in words. Give examples.
5) Solve the equation: $-5(2 x-3)+12 x=-4 x+9$

Solve each system of equations:
7) (Substitution) $\left\{\begin{array}{c}x=4 y-1 \\ 2 x-3 y=-34\end{array}\right.$
8) (Elimination) $\left\{\begin{array}{c}4 x+y=15 \\ 8 x-3 y=35\end{array}\right.$
9) (Graphing) $\left\{\begin{array}{c}y=2 x+1 \\ y=-\frac{1}{2} x-4\end{array}\right.$

10) $6^{-2}$ is NOT equal to -36 . Nor is it equal to +36 . Explain how negative exponents work, and say what $6^{-2}$ is actually equal to.
11) Expand, then simplify: $\left(2 b^{4} c\right)^{3}$

a) Identify two vertical angles.
b) Identify two alternate interior angles.
c) Identify two alternate exterior angles.
d) Identify two same-side interior angles.
e) Identify two corresponding angles.
f) If the two lines are parallel, and $m \angle 4=58^{\circ}$, find the measure of ALL other angles.
13) Start with $\mathbf{F}(\mathbf{2}, \mathbf{5})$
$1(4,9) V(6,5) E(4,6)$

- Translate 1 unit down and 3 units right.
- Reflect across the $y$ axis.
- Rotate $90^{\circ}$ counterclockwise.
- Label your final


14) Find the missing side on both triangles.
 coordinates.
