## Algebra Review \#37 SHOW HOW YOU SOLVED EACH PROBLEM

## 1.

Looking at the steps shown below, answer the following questions.

| Given: $3(x-2)=17$ |
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| (1st step) $\quad 3 x-6=17$ |
| (2nd step) $3 x=23$ |
| (3rd step) $\quad x=\frac{23}{3}$ |

What property justifies Step 1?

What property justifies Step 2?

What property justifies Step 3?
2. Identify if the graph has a positive, negative, undefined or zero slope.



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4. This table of ordered pairs contains elements of a function of $x$.

Which equation could define the function?
a) $y=-5 x+11$
b) $y=(x-2)^{2}+7$
c) $y=(x-3)^{2}+2$
d) $y=-2 x+11$

| $\mathbf{x}$ | $\mathbf{y}$ |
| :---: | :---: |
| 0 | 11 |
| 1 | 6 |
| 2 | 3 |
| 3 | 2 |
| 4 | 3 |

5. What are the $x$ and $y$ intercepts of the line represented by the equation $-2 y=x-1$ ?

## X-Intercept:

## Y-Intercept:

6. Graph $x-y=2$ on the graph provided below.


What is the slope?

What is the $y$-intercept?
7. If $y$ varies directly as $x$ and $y=30$ when $x=10$, what is the constant $k$ ?
8. Simplify the radical.
$\sqrt{75 m h^{5}}$
9. Simplify:
$2 a b\left(5 a b^{4}\right)^{2}$
10. Graph the inequality shown:

$$
y \leq 5-x
$$

|  |  |  |  |  | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

