Name _____Date _____ Class _____

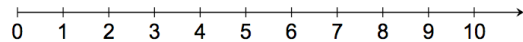For each problem, define the variable, write an inequality, find and graph the solution.

1.) Ian needs to save at least $85.00 for a new pair of basketball shoes. He has $25.00 in his piggy bank, and can save $12.00 from his allowance each week. How many weeks will Ian need to save to earn at least $85.00?

Variable: _____

Inequality: _____

Solution: _____
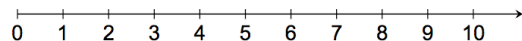
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0   1   2   3   4   5   6   7   8   9   10
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2.) The vet told Sarah that her dog should weigh at most 70 pounds. Her dog weighs 106 pounds, so Sarah set a goal that he would lose 4 pounds per week. How many weeks will it take for Sarah's dog to weigh 70 pounds or less?

Variable: _____
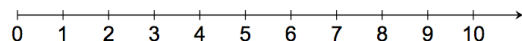
Inequality: _____

Solution: _____

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0   1   2   3   4   5   6   7   8   9   10
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3.) The temperature in the ice rink must stay below 50° F. This morning the temperature was 71°F. The ice rink runs a cooling device, that can decrease the temperature by 3.5° every hour. How many hours will it take for the temperature to fall below 50°?

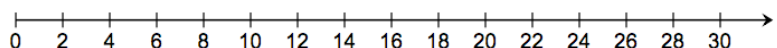Variable: _____

Inequality: _____

Solution: _____

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0   1   2   3   4   5   6   7   8   9   10
```

4.) Zoe and her dad go on a hot air balloon ride over the weekend. In order to remain safe, they cannot exceed an elevation of 450 feet. If they start at an elevation of 120 feet, and rise at a rate of 15 feet per minute, how many minutes can they continue to rise?
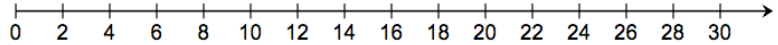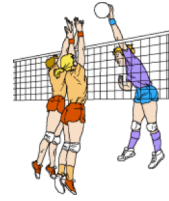
Variable: _____

Inequality: _____

Solution: _____

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0   2   4   6   8   10  12  14  16  18  20  22  24  26  28  30
```

5.) The volleyball team at Grady High School raised $350 to buy a new net, and some volleyballs. The net costs $180, and each ball costs $17.00. If the team does not want to exceed the amount of money they raised, how many volleyballs can they buy?

Variable: _____
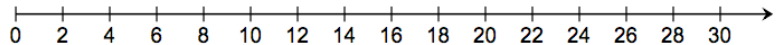
Inequality: _____

Solution: _____

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+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+--->
0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30
```

6.) Will has -$55.00 in his bank account. If he saves the $2.50 his mom gives him for lunch every day, how many days will it be until he has a balance of at least $0?
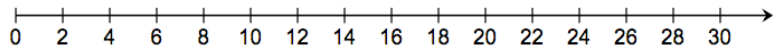
Variable: _____

Inequality: _____

Solution: _____

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+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+--->
0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30
```

7.) In order to keep a specific bacteria alive, the temperature in a science lab, cannot exceed -20°F. The electricity went out, when the temperature was -72°F, but is increasing at a rate of 6.5° per hour. How many hours do the scientist have until the bacteria is not safe?

Variable: _____

Inequality: _____

Solution: _____

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+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+--->
0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30
```

8.) Antonio is going to the carnival. He can spend no more than $20.00. If the ticket to get in is $7.50, and each ride costs $1.25, how many rides could Antonio ride at the carnival?

Variable: _____

Inequality: _____

Solution: _____

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+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+--->
0    2    4    6    8   10   12   14   16   18   20   22   24   26   28   30
```