Algebraic Equations Quiz Review

1. What’s the difference between an algebraic expression and an algebraic equation?
2. Write an algebraic equation for each sentence:
	1. Eight more than a number is 34.
	2. The product of 4 and a number is 36.
	3. The sum of a number and 9 is 13.
	4. A number divided by six then decreased by 5 is 45
3. Solve the following One-step Equations **using balancing method** (Show all your steps):

|  |  |  |
| --- | --- | --- |
| * 1. x + 5 = 15
 | * 1. y - 15 = 25
 | * 1. $\frac{y}{7}=21$
 |
| * 1. $\frac{y}{6}=72$
 | * 1. $6x=42$
 | * 1. $72=24x$
 |

1. Solve the following Two-step Equations **using balancing method** (Show all your steps):

|  |  |  |
| --- | --- | --- |
| * 1. 3p + 2 = 22
 | * 1. 2x – 5 = 11
 | * 1. $27=4m+7$
 |
| * 1. $17=4x-7$
 | * 1. $\frac{b}{9}-12=8$
 | * 1. $\frac{x}{7}+5=10$
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1. For the following problems**, choose a variable**, **write an equation for the situation**, and **use algebra to solve** the equation.
	1. A cycle shop rents bicycles for an $18 flat fee plus $3 per hour. Nino paid $39. For how long did Nino rent the bicycle?
	2. Alli spent half of her allowance going to the movies. She washed the family car and earned $7. What is her weekly allowance if she ended up with $16?