Math 6 Name _____

Unit 4: One Step Equations and Inequalities Review Date _____ Class: 1 2 3 4

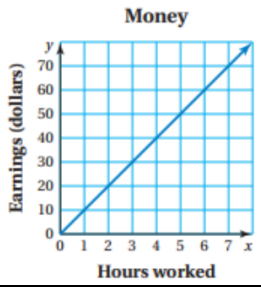
Equations (ALL STEPS MUST BE SHOWN on #s 4 – 12)

1) List the 4 steps to solving an equation: 1) 2) 3) 4)	2) What would you do to isolate the variable, or solve for x, in the equation 18x = 54?	3) Which equation does NOT have the same solution as the other 3 equations? a. x/9 = 3 b. x + 5 = 32 c. x – 17 = 10 d. 3x = 21
4) 5x = 315	5) x + 5.3 = 18	6) $\frac{x}{2} = 14$
7) x – 72 = 124	8) Together, two puppies weigh 15 pounds. One puppy weighs 11 lbs, and the other weighs p lbs. Write and solve an equation to solve for p.	9) Carrie had x dollars, and she doubled that amount by selling pencils at the Locker Stocker. Now, she has $24. Write an equation and solve for x, the amount she started with.
10) Christian used a total of x balloons to decorate for a party. He split the balloons into groups of 12, and he had 10 groups. Write an equation and solve for x, the total number of balloons he had.	11) Sara bought 125 ride tickets and x game tickets. She had a total of 200 tickets. Write an equation and solve for x.	12) On Tuesday, x kids took pictures. There were 20 fewer students who took buddy pictures on Wednesday. If 58 kids took buddy pictures on Wednesday, write and solve an equation to solve for x.

Inequalities

13) Graph the inequality: $m > 3$	14) Graph the inequality: $p \leq 3$	15) Graph the inequality: $y \geq 3$
16) Write 3 solutions and 3 non-solutions of the inequality $12 \geq x$ Solutions: _____ _____ _____ Non-solutions: _____ _____ _____	17) Write 3 solutions and 3 non-solutions of the inequality $r > 9$ Solutions: _____ _____ _____ Non-solutions: _____ _____ _____	18) What inequality is graphed? 
19) The speed limit is 55 mph. Write the inequality.	20) You must be at least 18 to vote. Write the inequality.	21) There are over 1400 kids at ECMS. Write the inequality.

Direct Variation

22) Does this graph represent a direct variation (proportional relationship)?	23) Does this graph represent a direct variation (proportional relationship)?	24) What 2 things must be true about a graph of a direct variation (proportional relationship)? 1) 2)
25) Claire earned $150 in 10 hours. a. What is her unit rate (dollars per hour)? b. What is the direct variation equation?	26) Write a direct variation equation that matches the table. x: 0, 2, 5, 8, 20 y: 0, 8, 20, 32, 80	27) Write the direct variation equation: 
28) The more hours a student studies, the higher their grades. What does the dependent variable represent? What does the independent variable represent?	29) Does the point (8, 9) satisfy the equation $y = 2x$?	30) Does the point (77, 11) satisfy the equation $y = 7x$?

Math 6 Name **ANSWER KEY**

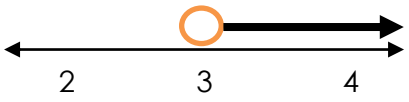
Unit 4: One Step Equations and Inequalities Review

Equations (ALL STEPS MUST BE SHOWN on #s 4 – 12)

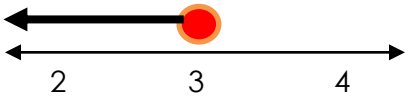
1) List the 4 steps to solving an equation: 1) Write the equation. 2) Perform the inverse operation on BOTH sides. 3) Solve. 4) Substitute your answer to check.	2) What would you do to isolate the variable, or solve for x, in the equation 18x = 54? Divide both sides of the equation by 18	3) Which equation does NOT have the same solution as the other 3 equations? a. x/9 = 3 b. x + 5 = 32 c. x – 17 = 10 d. 3x = 21 A, B, and C all have a solution of 27, but D has a solution of 7.
4) 5x = 315 X = 63	5) x + 5.3 = 18 x = 12.7	6) $\frac{x}{2} = 14$ X = 28
7) x – 72 = 124 x = 196	8) Together, two puppies weigh 15 pounds. One puppy weighs 11 lbs, and the other weighs p lbs. Write and solve an equation to solve for p. P + 11 = 15 P = 4	9) Carrie had x dollars, and she doubled that amount by selling pencils at the Locker Stocker. Now, she has $24. Write an equation and solve for x, the amount she started with. 2x = 24 X = 12
10) Christian used a total of x balloons to decorate for a party. He split the balloons into groups of 12, and he had 10 groups. Write an equation and solve for x, the total number of balloons he had. x/12 = 10 x = 120	11) Sara bought 125 ride tickets and x game tickets. She had a total of 200 tickets. Write an equation and solve for x. 125 + x = 200 X = 75	12) On Tuesday, x kids took pictures. There were 20 fewer students who took buddy pictures on Wednesday. If 58 kids took buddy pictures on Wednesday, write and solve an equation to solve for x. X – 20 = 58 X = 78

Inequalities

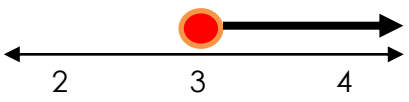
13) Graph the inequality:
$m > 3$



14) Graph the inequality:
$p \leq 3$



15) Graph the inequality:
$y \geq 3$



16) Write 3 solutions and 3 non-solutions of the inequality
$12 \geq x$

Solutions: 12, 11, 10…

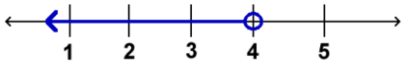
Non-solutions: 13, 14, 15…

17) Write 3 solutions and 3 non-solutions of the inequality $r > 9$

Solutions: 10, 11, 12…

Non-solutions: 9, 8, 7…

18) What inequality is graphed?



X < 4

19) The speed limit is 55 mph. Write the inequality.

X ≤ 55

20) You must be at least 18 to vote. Write the inequality.

X ≥ 18

21) There are over 1400 kids at ECMS. Write the inequality.

X > 1,400

Direct Variation

22) Does this graph represent a direct variation (proportional relationship)?

No

23) Does this graph represent a direct variation (proportional relationship)?

No

24) What 2 things must be true about a graph of a direct variation (proportional relationship)?

1) Pass through (0, 0)

2) Straight line

25) Claire earned $150 in 10 hours.

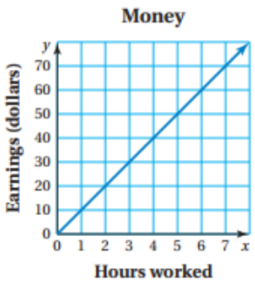
a. What is her unit rate (dollars per hour)? $15/hr

c. What is the direct variation equation? Y = 15x

26) Write a direct variation equation that matches the table. Y = 4x

x	0	2	5	8	20
y	0	8	20	32	80

27) Write the direct variation equation: y = 10x



28) The more hours a student studies, the higher their grades.

What does the dependent variable represent? grades

What does the independent variable represent? hours

29) Does the point (8, 9) satisfy the equation $y = 2x$?

9 = 2(8)
9 = 16
No

30) Does the point (77, 11) satisfy the equation $y = 7x$?

11 = 77(7)
11 = 539
No