SOLVING EQUATIONS AND INEQUALITIES	
1. Which value of p is the solution of $5p - 1 = 2p + 20$?	2. What is the value of x in the equation $2(x - 4) = 4(2x + 1)$? 1) -2 2) 2 3) $-\dfrac{1}{2}$ 4) $\dfrac{1}{2}$
3. If $12x = 4(x + 5)$, then x equals 1) $\dfrac{1}{12}$ 2) $\dfrac{5}{8}$ 3) 1.25 4) 2.5	4. If $2x + 5 = -25$ and $-3m - 6 = 48$, what is the product of x and m?
5. If $3(x - 2) = 2x + 6$, the value of x is	6. Solve for x: $5(x - 2) = 2(10 + x)$
7. What is the value of m in the equation $2m - (m + 1) = 0$	8. If $3(x + 2) - 2(x + 1) = 8$, the value of x is
9. The inequality $7 - \dfrac{2}{3}x < x - 8$ is equivalent to 1) $x > 9$ 2) $x > -\dfrac{3}{5}$ 3) $x < 9$ 4) $x < -\dfrac{3}{5}$	10. Which inequality is shown on the accompanying graph? 1) $x < -1$ 2) $x \leq -1$ 3) $x > -1$ 4) $x \geq -1$
11. Solve the inequality $-5(x - 7) < 15$ algebraically for x.	12. Solve algebraically for x: $2(x - 4) \geq \dfrac{1}{2}(5 - 3x)$

MODELING EQUATIONS	
1. Tara buys two items that cost d dollars each. She gives the cashier $20. Which expression represents the change she should receive? 1) $20 - 2d$ 2) $20 - d$ 3) $20 + 2d$ 4) $2d - 20$	2. Julie has three children whose ages are consecutive odd integers. If x represents the youngest child's age, which expression represents the sum of her children's ages? 1) $3x + 3$ 2) $3x + 4$ 3) $3x + 5$ 4) $3x + 6$
3. Tim ate four more cookies than Alice. Bob ate twice as many cookies as Tim. If x represents the number of cookies Alice ate, which expression represents the number of cookies Bob ate? 1) $2 + (x + 4)$ 2) $2x + 4$ 3) $2(x + 4)$ 4) $4(x + 2)$	4. Tamara has a cell phone plan that charges $0.07 per minute plus a monthly fee of $19.00. She budgets $29.50 per month for total cell phone expenses without taxes. What is the maximum number of minutes Tamara could use her phone each month in order to stay within her budget?
5. Mario paid $44.25 in taxi fare from the hotel to the airport. The cab charged $2.25 for the first mile plus $3.50 for each additional mile. How many miles was it from the hotel to the airport?	6. Peter begins his kindergarten year able to spell 10 words. He is going to learn to spell 2 new words every day. Write an inequality that can be used to determine how many days, d, it takes Peter to be able to spell *at least* 75 words. Use this inequality to determine the minimum number of whole days it will take for him to be able to spell *at least* 75 words.
7. A prom ticket at Smith High School is $120. Tom is going to save money for the ticket by walking his neighbor's dog for $15 per week. If Tom already has saved $22, what is the minimum number of weeks Tom must walk the dog to earn enough to pay for the prom ticket?	8. An online music club has a one-time registration fee of $13.95 and charges $0.49 to buy each song. If Emma has $50.00 to join the club and buy songs, what is the maximum number of songs she can buy? 1) 73 2) 74 3) 130 4) 131
9. Chelsea has $45 to spend at the fair. She spends $20 on admission and $15 on snacks. She wants to play a game that costs $0.65 per game. Write an inequality to find the maximum number of times, x, Chelsea can play the game. Using this inequality, determine the maximum number of times she can play the game.	10.Tony makes a phone call at a pay phone. The charge is 25 cents for the first four minutes, and 10 cents for each additional minute. Tony has $2.10 in change in his pocket. Write an inequality that can be used to find m, the maximum number of minutes that Tony can talk on the phone. Solve this inequality algebraically to find the maximum number of whole minutes he can talk on the phone.
11. The sum of the ages of the three Romano brothers is 63. If their ages can be represented as consecutive integers, what is the age of the middle brother?	12. Sara's telephone service costs $21 per month plus $0.25 for each local call, and long-distance calls are extra. Last month, Sara's bill was $36.64, and it included $6.14 in long-distance charges. How many local calls did she make?

ABSOLUTE VALUE EQUATIONS AND INEQUALTIES	
1. $\|3x-1\|=14$	2. $\|2y+7\|=7$
2. $\|y-8\|-2=5$	4. $\|x+17\|+10=70$
5. $3\|x+7\|-14=4$	6. $-2\|y-7\|+18=8$
7. $-5\|4y-11\|-3=12$	8. $\|x+3\|=3x+1$
9. $\|5-8x\|<43$	10. $7\|r-2\|\le 77$
11. $\frac{\|x-4\|}{5}\le 2$	12. $9\|r-2\|-10< -73$
13. $\frac{\|4m+1\|}{7}\le 1$	14. $\frac{\|2+3x\|}{2}\ge 5$

COMPOUND INEQUALITIES	
1. -5<x+5<5	2. 1<3x+4<10
2. k-3>1 or k-3<-1	4. b-2>18 or 3b<54
5. -3≤ 3 + m ≤ 7	6. 2r+8>16-2r and 7r+21<r-9
7. 4b+18≤ $-12b - 14 \leq 14 - 5b$	8. 5v+10≤ $-4v - 17 < 9 - 2v$
9. 4a+8> $11a + 15$ and 13-14a≤ $13 - 3a$	10. 36≤ $11 - 5x \leq 66$

ARITHMETIC/GEOMETRIC SERIES	
What is the common difference of the arithmetic sequence $5, 8, 11, 14$? 1) $\frac{8}{5}$ 2) -3 3) 3 4) 9	What is the common ratio of the geometric sequence shown below? $$-2, 4, -8, 16, \ldots$$ 1) $-\frac{1}{2}$ 2) 2 3) -2 4) -6
The common ratio of the sequence $-\frac{1}{2}, \frac{3}{4}, -\frac{9}{8}$ is 1) $-\frac{3}{2}$ 2) $-\frac{2}{3}$ 3) $-\frac{1}{2}$ 4) $-\frac{1}{4}$	What is the common difference in the sequence $2a + 1, 4a + 4, 6a + 7, 8a + 10, \ldots$? 1) $2a + 3$ 2) $-2a - 3$ 3) $2a + 5$ 4) $-2a + 5$
What is the common difference of the arithmetic sequence below? $$-7x, -4x, -x, 2x, 5x, \ldots$$ 1) -3 2) $-3x$ 3) 3 4) $3x$	is the formula for the nth term of the sequence $54, 18, 6, \ldots$? 1) $a_n = 6\left(\frac{1}{3}\right)^n$ 2) $a_n = 6\left(\frac{1}{3}\right)^{n-1}$ 3) $a_n = 54\left(\frac{1}{3}\right)^n$ 4) $a_n = 54\left(\frac{1}{3}\right)^{n-1}$
ka is stacking boxes of tissues for a store display. Each row of tissues has 2 fewer boxes than the row below. The first row has 23 boxes of tissues. Write a function to represent the arithmetic sequence. How many boxes will there be in the tenth row?	Chem deposited $115.00 in a savings account. Each week thereafter, he deposits $35 into the account. Write a function to represent the total amount Chem has deposited for any particular number of weeks after his initial deposit. How much has Chem deposited 30 weeks after his initial deposit?
Write the formula for this sequence: -1, 6, -36, 216…	Write the formula for this sequence: -2, -4, -8, -16….
Write the formula for this sequence: -37, -38, -19, -10….	Write the formula for this sequence: 31, 32, 11, 2, ….