INEQUALITIES FROM WORD PROBLEMS C2

	WORD PROBLEM		WORKING OUT
1)	A farmer has a between 400 and 600 yards of fencing (inclusive) to make a square enclosure. *If his field has sides length **s**, write an inequality to show what size field he can make.*		
2)	It takes Alice between 10 and 12 minutes (inclusive) to run a mile. At this pace, how long would it take her to run a half marathon (13 miles)? *Write an inequality using the variable **t** to show this.*		
3)	Flame goes shopping with $240. She spends more than half but less than three-quarters of the money. *Write an inequality using the variable **m** to show how much money she has left over.*		
4)	It takes Newton's between 25 to 32 seconds (exclusive) to swim a length of a swimming pool *Write an inequality to show the time it takes (**t**) in seconds for him to swim 20 lengths.*		
5)	Sally can make from 6 to 10 Fimo models in a day. She needs to make 120 models for an exhibition. *Write an inequality involving the variable **x** to show how long it will take her to make all the models.*		
6)	Bert has a salary of $26,000. He is trying to save between 5% and 10% of his salary each year. He has already saved $500 so far this year. *Write an inequality using the variable **s** to show how much more money he needs to save.*		
7)	*Captain is driving o a 370 mile journey. His speed is averaging between 45 and 60 miles per hour (inclusive). He has traveled 70 miles so far. Write an inequality involving the variable **r** to show how it will take him to complete the remainder of his journey.*		
8)	Bill is 2 years younger than Anna. Chris is more than twice as old, but less than 3 times as old, as Bill. *If Alice is 9 years old, write an inequality using the variable **c** to show how old Chris is.*		

Name Date

INEQUALITIES FROM WORD PROBLEMS C2 ANSWERS

	WORD PROBLEM		WORKING OUT
1)	A farmer has a between 400 and 600 yards of fencing (inclusive) to make a square enclosure. *If his field has sides length **s**, write an inequality to show what size field he can make.*		$400 \div 4 = 100$ $600 \div 4 = 150$ $100 \le s \le 150$ yards
2)	It takes Alice between 10 and 12 minutes (inclusive) to run a mile. At this pace, how long would it take her to run a half marathon (13 miles)? *Write an inequality using the variable **t** to show this.*		$10 \times 13 = 130$ $12 \times 13 = 156$ $130 \le t \le 156$ minutes
3)	Flame goes shopping with $240. She spends more than half but less than three-quarters of the money. *Write an inequality using the variable **m** to show how much money she has left over.*		½ of 240 = 120 ¾ of 240 = 180 $240 - 180 = 60$ $\$60 \le m < \$120$
4)	It takes Newton's between 25 to 32 seconds (exclusive) to swim a length of a swimming pool *Write an inequality to show the time it takes (**t**) in seconds for him to swim 20 lengths.*		$20 \times 25 = 500$ $20 \times 32 = 640$ $500 < t < 640$ seconds
5)	Sally can make from 6 to 10 Fimo models in a day. She needs to make 120 models for an exhibition. *Write an inequality involving the variable **x** to show how long it will take her to make all the models.*		$120 \div 6 = 20$ $120 \div 10 = 12$ $12 \le x \le 20$ days
6)	Bert has a salary of $26,000. He is trying to save between 5% and 10% of his salary each year. He has already saved $500 so far this year. *Write an inequality using the variable **s** to show how much more money he needs to save.*		10% of 26,000 =2600 5% of 26,000 = 1300 $s + 500 \ge \$1300$ and $s + 500 \le \$2600$ This gives us: $\$800 \le s \le \$2100$
7)	*Captain is driving o a 370 mile journey. His speed is averaging between 45 and 60 miles per hour (inclusive). He has traveled 70 miles so far. Write an inequality involving the variable **r** to show how it will take him to complete the remainder of his journey.*		$370 - 70 = 300$ miles $300 \div 45 = 6\,⅔$ hours 6 ⅔ h = 6 h 40 min $300 \div 60 = 5$ hours 5 hours $\le r \le$ 6 h 40 min
8)	Bill is 2 years younger than Anna. Chris is more than twice as old, but less than 3 times as old, as Bill. *If Alice is 9 years old, write an inequality using the variable **c** to show how old Chris is.*		Bill is 9 − 2 = 7 years $2 \times 7 = 14$; $3 \times 7 = 21$ $14 < c < 21$ years old