


















INEQUALITIES FROM WORD PROBLEMS C1

WORD PROBLEM	WORKING OUT
1) A farmer has a between 40 and 60 yards of fencing (inclusive) to make a square enclosure. <i>If his field has sides length s, write an inequality to show what size field he can make.</i>	
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)? <i>Write an inequality using the variable t to show this.</i>	
3) Flame goes shopping with \$240. She spends more than half but less than three-quarters of the money. <i>Write an inequality using the variable m to show how much money she has left over.</i>	
4) It takes Newton's between 25 to 32 seconds (exclusive) to swim a length of a swimming pool <i>Write an inequality to show the time it takes (t) in seconds for him to swim 20 lengths.</i>	
5) Sally can make from 6 to 10 Fimo models in a day. She needs to make 120 models for an exhibition. <i>Write an inequality involving the variable x to show how long it will take her to make all the models.</i>	
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. <i>Write an inequality using the variable s to show how much more money he needs to save.</i>	
7) Captain is driving o a 360 mile journey. His speed is averaging between 45 and 60 miles per hour (inclusive). He has traveled 60 miles so far. <i>Write an inequality involving the variable r to show how it will take him to complete the remainder of his journey.</i>	
8) Bill is 2 years younger than Anna. Chris is more than twice as old, but less than 3 times as old, as Bill. <i>If Alice is 9 years old, write an inequality using the variable c to show how old Chris is.</i>	



INEQUALITIES FROM WORD PROBLEMS C1 ANSWERS

	WORD PROBLEM	WORKING OUT
1)	<p>A farmer has a between 40 and 60 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.</p> 	<p>$40 \div 4 = 10$ $60 \div 4 = 15$ $10 \leq s \leq 15$ yards</p>
2)	<p>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.</p> 	<p>$10 \times 13 = 130$ $12 \times 13 = 156$ $130 \leq t \leq 156$ minutes</p>
3)	<p>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.</p> 	<p>$\frac{1}{2}$ of 240 = 120 $\frac{3}{4}$ of 240 = 80 $\\$80 \leq m < \\120</p>
4)	<p>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.</p> 	<p>$20 \times 25 = 500$ $20 \times 32 = 640$ $500 < t < 640$ seconds</p>
5)	<p>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.</p> 	<p>$120 \div 6 = 20$ $120 \div 10 = 12$ $12 \leq x \leq 20$ days</p>
6)	<p>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.</p> 	<p>10% of 26,000 = 2600 5% of 26,000 = 1300 $1300 - 500 = 800$ $2600 - 500 = 2100$ $\\$800 \leq s \leq \\2100</p>
7)	<p>Captain is driving on a 360 mile journey. His speed is averaging between 45 and 60 miles per hour (inclusive). He has traveled 60 miles so far. Write an inequality involving the variable r to show how it will take him to complete the remainder of his journey.</p> 	<p>$360 - 60 = 300$ miles $300 \div 45 = 6 \frac{2}{3}$ hours $6 \frac{2}{3}$ h = 6 h 40 min $300 \div 60 = 5$ hours $5 \text{ hours} \leq r \leq 6 \text{ h } 40 \text{ min}$</p>
8)	<p>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.</p> 	<p>Bill is $9 - 2 = 7$ years $2 \times 7 = 14$; $3 \times 7 = 21$ $14 < c < 21$ years old</p>