

Name: _____ Team #: _____
 School: _____

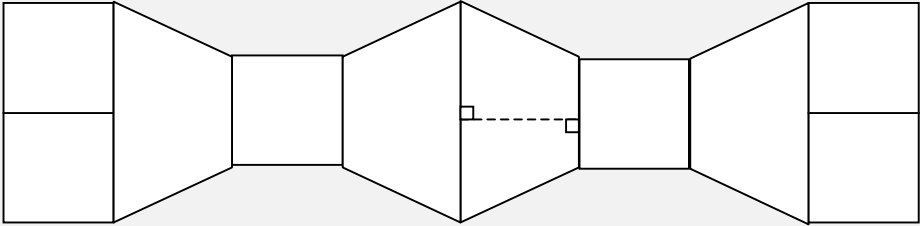
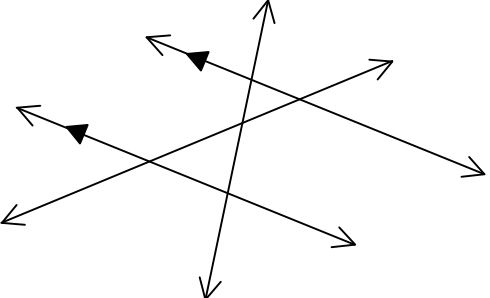
Number Sense	Answers	Score
<p>1. How many positive factors does 208 have?</p>	10	3 3
<p>2. Ben has 16 jackets, 11 pairs of pants, 20 tee-shirts, and 3 belts in his closet. If he picks at random, how many items will he have to pick to guarantee that he gets a complete outfit (one of each item)?</p>	48	3 3
<p>3. What is the smallest integer greater than 100 that is divisible by every positive integer less than or equal to 4, that is 1, 2, 3 and 4?</p>	108	3 3
<p>4. What is the positive difference between the least common multiple and greatest common factor of 42 and 98?</p>	280	3 3
<p>5. James is in charge of sorting a shelf of books of fantasy, historical, and sci-fi by genre. Books must belong in one genre, or any combination of the three. There are 33 fantasy, 46 historical, and 32 sci-fi in James' collection. Sci-fi is his favorite genre; 11 are only sci-fi, 6 are only sci-fi and fantasy, 10 are only sci-fi and historical. He has 5 favorite books which are all the books in all three genres. There are 22 only historical books. If there are 76 books in total, how many are only fantasy and historical but NOT sci-fi?</p>	9	3 3
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Algebra Sense	Answers	Score
<p>1. I have an apple tree that grows 4 apples a day at exactly noon. The tree had 6 apples on Monday night. If I pick all the apples from the tree on the following Sunday at 6:00 PM, how many apples will I have?</p>	30	3 3
<p>2. Kirsten loves shoes. For her birthday all her friends gave her shoes. Merima, Ben, and Jonathon gave a total of 18 shoes. Jonathon gave three times as many as Merima, who gave $\frac{1}{5}$ as many as Ben. How many shoes did Ben give?</p>	10	3 3
<p>3. Marie and Celia are having a race. Marie runs at 15 feet per second and Celia runs at 12 feet per second. The course is 100 yards. How much time, in seconds, should Celia start before Marie if they want to finish the race together?</p>	5 [secs]	3 3
<p>4. For how many positive integers (1, 2, 3, ...), x, is $x - 12 < 8$?</p>	15	3 3
<p>5. I am knitting a sweater for my friend. I started at 6:00 AM. It takes 4 minutes to knit a row and I need to knit 250 rows. What time will I finish assuming I work constantly without stopping?</p>	10:40 [PM]	3 3
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Geometry Sense	Answers	Score
<p>1. On the line $3x + 5y = 14$, how many points exist between $(13, -5)$ and $(-2, 4)$, exclusive, that have coordinates that are both integers?</p>	2	3 3
<p>2. At what point do the lines $4x - 2y = 5$ and $3x + y = -3$ intersect?</p>	$(-\frac{1}{10}, -\frac{27}{10})$	3 3
<p>3. The figure below is formed from identical trapezoids and squares. What is the area of the entire figure?</p> 	1080	3 3
<p>4. Find length x:</p> 	14	3 3
<p>5. Ben is walking around. Starting from his house, he walks at a rate of 3mph north for 20 minutes, then turns east and, maintaining his speed, walks for half an hour. At that point, he turns south and slows to a speed of 2mph and proceeds for another half-hour. Then he turns west and walks at a speed of 4mph. Some minutes later, he passes by a friend's house. If that friend's house is half a mile east of Ben's house, how long has Ben been walking in minutes?</p>	95 [minutes]	3 3
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Probability/Statistics	Answers	Score
<p>1. What is the probability of rolling a fair, 6-sided die and getting a prime number, and then flipping a fair coin and getting heads?</p>	$\frac{1}{4}$	3 3
<p>2. Given the following data set: {2, 4, 3, 6, 9, 3, 4, 8, 13, 12, 5, 4, 15}, which is the greatest: the mean, the median, or the mode?</p>	Mean	3 3
<p>3. Two fair 6-sided dice are rolled and both show even numbers. What is the probability that the sum is 6?</p>	$\frac{2}{9}$	3 3
<p>4. Merima really likes frozen yogurt. In fact, she is trying to go to every frozen yogurt place in Renton. A report finds that out of 6 places, 2 have rotten yogurt. If she has been to half of them so far, what is the probability she has eaten rotten yogurt?</p>	$\frac{4}{5}$	3 3
<p>5. In Bob's class the average on last week's math test was 90. The average of the boy's scores was 86. If there are twice as many girls as boys in the class, what was the average of the girls' scores?</p>	92	3 3
Total Score:		