Elementary School Math League Tournament
2016

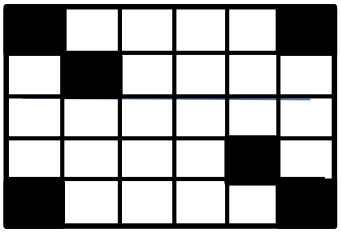
Individual Round - Grade 6

Name: _____ Team # _____ School: _____

_____1. **From this group which is the largest fraction** $\left\{\frac{1}{3}, \frac{1}{4}, \frac{1}{5}, \frac{5}{10}\right\}$ **?**

_____**2. David drove the first 18 km of his 54 km drive to Marmora when he stopped for a juice break. What fraction of his overall trip is left for him to complete?**

_____**3. In the diagram, each small square in the grid is the same size. What percent of the grid is shaded?**



_____**4. What number is B? (5 × 1) + (5 × 2) + (5 × 3) + (5 × 4) = 5 × B**

_____**5. How many weeks is 103 days nearly?**

_____**6. Write** $6\frac{3}{7}$ **as an improper fraction in the form** $\frac{A}{B}$**. What is A + B?**

_____**7. Aidan saves 60% of his weekly allowance and spends the rest. His allowance is $10 a week. How much will he spend over two weeks?**

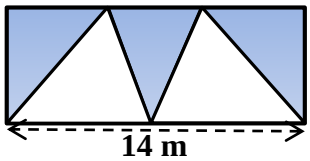
_____**8. A point T has coordinates (5, -3). What is the <u>sum</u> of the coordinates after the point is translated 6 units up and 3 units to the left?**

_____**9. A rectangular prism has a volume of 186 cm^3. The area of the base is 31 cm^2. What is its height?**

_____**10. Winnie paid $6.99 for 3 tennis balls. How much would Winnie pay for 15 tennis balls?**

_____**11. Two trains are heading towards each other at 30 m/s. They are initially 1 km apart. How far apart are they after 10 s?**

_____**12. What is the area, in m^2, of the shaded part of the rectangle?**



_____**13. How many positive integers less than 400 can be created using only the digits 1, 2 or 3, with repetition of digits allowed?**

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_____14. A student may pay $1.50 for a single bus ticket or $5.75 for a package of 5 tickets. If a student requires 40 tickets, how much does she save by buying all of the tickets in packages of 5 rather than buying 40 single tickets?

_____15. The numbers 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 are written on separate cards and placed face down on a table. A card is chosen at random and flipped over. What is the probability that the number on this card is a prime number?

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1. 5/10	**2. 2/3**	**3. 20%**	**4. 10**	**5. 15**	**6. 52**	**7. 8**
8. 5	**9. 6**	**10. 34.95**	**11. 400**	**12. 28**	**13. 39**	**14. 14**
15. 5/11						

14. If the student were to buy 40 individual tickets, this would cost 40 × $1.50 = $60.00. If the student were to buy the tickets in packages of 5, she would need to buy 40 ÷ 5 = 8 packages, and so this would cost 8 × $5.75 = $46.00. Therefore, she would save $60.00 − $46.00 = $14.00.

15. Of the given 11 numbers, the numbers 3, 5, 7, 11 and 13 are prime. (4, 6, 8, 10 and 12 are not prime, since they are divisible by 2, and 9 is not prime since it is divisible by 3.) Therefore, 5 of the 11 numbers are prime. Thus, if a card is chosen at random and flipped over, the probability that the number on this card is a prime number is 5/11 .