

- (2 points)** Arnav has 37 peanut butter cookies. He has 18 fewer chocolate chip cookies than peanut butter cookies. Arnav has 13 more sugar cookies than chocolate chip cookies. How many cookies does Arnav have in all?
- (2 points)** Aman needs to add  $\frac{3}{4}$  of a cup of flour to a recipe. He only has a  $\frac{1}{4}$  cup measure. How many cups of flour does Aman need to add? Simplify your answer and write it as a proper fraction or as a whole or mixed number.
- (2 points)** Rithik has \$110. If he spends 15% of his money on a backpack, then how much money does he have left?
- (2 points)** While sorting some buttons, Karthik put 2 buttons in the first box, 6 buttons in the second box, 18 buttons in the third box, and 54 buttons in the fourth box. If this pattern continues, how many buttons will Karthik put in the fifth box?
- (3 points)** How many of the following statements below are true?

- 135 is divisible by 9
- 546 is divisible by 6
- 296 is divisible by 4
- 777 is divisible by 6
- 5648 is divisible by 4

- (3 points)** Carson wants to buy a jump rope that costs \$8.49, a board game that costs \$10.99, and a basketball that costs \$6.49. He saved \$18.00 from his allowance, and his dad gave him \$20.00. How much money does Carson have left over after buying the jump rope, board game and basketball?
- (3 points)** Let

$$\begin{aligned}A &= \frac{5}{12} + \frac{1}{4} + \frac{1}{3} \\B &= \frac{9}{12} - \frac{1}{2} - \frac{1}{4} \\C &= 2\frac{1}{4} + 5\frac{5}{12} - 3\frac{2}{3} \\D &= 5\frac{1}{8} - 1\frac{1}{2} + 2\frac{1}{4} - 2\frac{7}{8}\end{aligned}$$

Find the value of  $(A + B) \times (C - D)$ .

- (3 points)** Chanda is deciding what to wear to school. She has a blue shirt and a purple shirt, and she has white and black pants. She also has sneakers and sandals. If she can wear any color shirt with any pair of pants and any pair of shoes, how many different combinations can Chanda wear?
- (4 points)** 500 students went to the amusement park, Islands of Adventures, last week. Some of the students rode the Hulk Rollercoaster or the Popeyes Bilge-Rat Barges ride. If 237 students rode the Hulk Rollercoaster, 168 students rode the Popeyes Bilge-Rat Barges ride, and 49 rode both the Hulk Rollercoaster and the Popeyes Bilge-Rat Barges ride, how many students rode neither the Hulk Rollercoaster nor the Popeyes Bilge-Rat Barges ride?

10. (4 points) Let

$$A = \text{the missing fraction in the sequence } \frac{1}{2}, \frac{1}{3}, \frac{2}{9}, \frac{4}{27}, \dots, \frac{24}{243}.$$

$$B = 169 \div 13 - 18 \times \frac{1}{2}$$

$$C = \frac{8}{9} \times \frac{9}{9} + \frac{1}{81}$$

$$D = \frac{190 - 102 + 2}{30}$$

Compute the value of  $\frac{D}{(A + B + C)}$

11. (4 points) Ahad is giving away free white t-shirts to promote his stain-remover. He can spend up to \$1,200 on the white t-shirts. If each white t-shirt costs Ahad \$6, what is the maximum number of free white t-shirts will he be able to give away?

12. (4 points) Let

$$A = \text{the remainder of } 95 \div 15$$

$$B = \text{the remainder of } 72 \div 14$$

$$C = \text{the remainder of } 79 \div 15$$

$$D = \text{the remainder of } 89 \div 16$$

Find the value of  $AD - BC$ .

13. (5 points) Pruthak lives on the 9<sup>th</sup> floor of a building. There are 36 stairs between two connecting floors. How many stairs does Pruthak have to climb to reach the 9<sup>th</sup> floor, starting from the first floor?

14. (5 points) How many of the following statements are false?

I.  $867 + 384$  is odd.

II.  $1453 - 1276$  is even.

III.  $374 \times 87$  is odd.

IV.  $864 \div 54$  is even.

V.  $1008 \div 36$  is odd.

15. (5 points) At Rickards High School,  $\frac{2}{3}$  of the students are enrolled in a math class. Of the students enrolled in a math class,  $\frac{4}{5}$  are enrolled in an Algebra class. What fraction of the students at Rickards High School are enrolled in a math class?