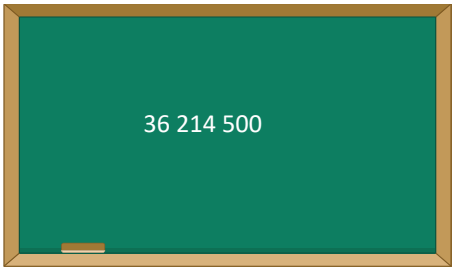
QUESTIONS 5-6

Q1:



The number written on the board was read by the student as "Thirty-five million two hundred fourteen thousand six hundred."

Which two digits did they swap while reading? **(1 point)**

A) 1 and 2 B) 5 and 6
C) 3 and 4 D) 5 and 0

Q2: A number pattern is given as follows:

- 12th step: 74
- 13th step: 79
- 16th step: 94

Based on this pattern, what is the value at the 2nd step? **(1 point)**

A) 19 B) 24 C) 29 D) 34

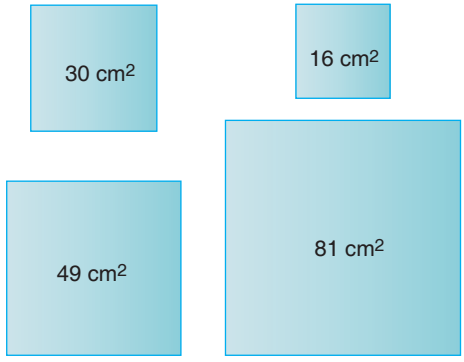
Q3: In a division operation with a remainder:

- Divisor = 35
- Quotient = 30

Which of the following cannot be the dividend? **(1 point)**

A) 1080 B) 1082
C) 1084 D) 1086

Q4: Four squares are given below, with their areas written inside them.



How many of these squares have at least one side length that is a natural number? **(1 point)**

A) 1 B) 2 C) 3 D) 4

Q5:

There is some money in the piggy banks given above. If Alex gives $12 to Emma, they will have equal amounts of money in their piggy banks.

What was the initial difference between the amounts in their piggy banks? (1 point)

A) 6 B) 12 C) 18 D) 24

Q6:

A delivery truck consumes 47 liters of gasoline per day.

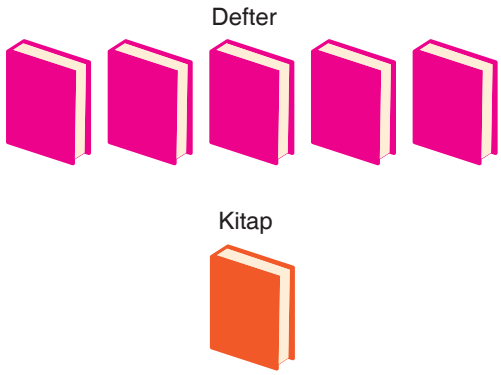
The price per liter of gasoline is $6.

How much does this truck spend on gasoline in 30 days? (2 points)

A) 8280 B) 8460

C) 8640 D) 8800

Q7:



Olivia pays $90 for 5 notebooks and 1 book.

The price of the book is $30.

What is the price of one notebook? (2 points)

A) $10 B) $12

C) $14 D) $15

Q8: Below are the ticket prices for adults and students at a theater.

	Adult	Student
Price of a ticket	$35	$18

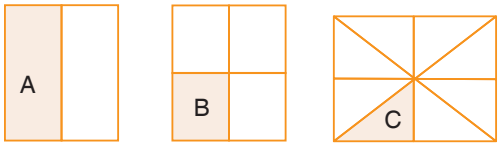
For one show, 42 adult tickets and 25 student tickets were purchased.

What is the total revenue from ticket sales for this show in dollars? (2 points)

A) 1920 B) 1940

C) 1960 D)1980

Q9: The given models represent unit fractions with colored parts.



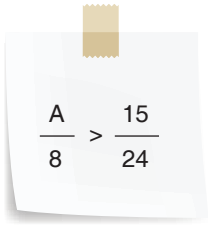
Which of the following correctly orders these fractions from smallest to largest? (2 points)

A) A < B < C
B) B < C < A
C) C < B < A
D) C < A < B

Q10: Which of the following classifications of fraction types is correct? (2 points)

	Proper fraction	Improper Fraction	Mixed Fraction
A)	$\frac{5}{4}$	$1\frac{1}{7}$	$\frac{2}{3}$
B)	$\frac{3}{4}$	$1\frac{8}{7}$	$2\frac{2}{4}$
C)	$\frac{3}{5}$	$\frac{8}{7}$	$1\frac{2}{5}$
D)	$\frac{5}{6}$	$\frac{10}{9}$	$\frac{11}{10}$

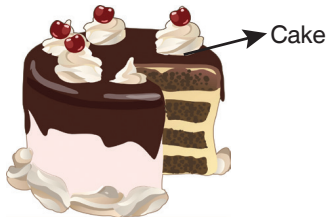
Q11:



According to the given order, which of the following cannot be placed in position "A"? (3 points)

A) 5
B) 6
C) 7
D) 8

Q12:



A cake in a bakery is divided into 12 equal slices, and 5 slices have been sold for $25.

How much will be earned from selling the remaining slices? (3 points)

A) $30
B) $35
C) $40
D) $45

Q13: $\frac{3}{5}$ of Mia's money is equal to $\frac{3}{8}$ of Noah's money.

- Mia has $75.

How much money does Noah have? (3 points)

A) $120 B) $135

C) $150 D) $180

Q14:

$$A = \frac{3}{4} + \frac{2}{3}$$

$$B = \frac{5}{2} - 1$$

According to the given inequalities, how much greater is B than A? (3 points)

A) $\frac{1}{12}$ B) $\frac{1}{9}$ C) $\frac{1}{6}$ D) $\frac{1}{4}$

Q15: The given fractions have been converted into decimal numbers.

Which of the following is correct? (3 points)

A) $\frac{4}{9} = 0.04$ B) $\frac{16}{10} = 0.16$

C) $\frac{379}{1000} = 3.79$ D) $\frac{423}{10} = 42.3$

Q16:

A sapling is 58.6 cm tall when planted and grows 12.4 cm each month.

What will its height be after three months? (4 points)

A) 94.6 cm B) 94.8 cm

C) 95.6 cm D) 95.8 cm

Q17:

A store sells:

- Books for $29.99
- Notebooks for $18.40
- Pens for $12.45

Selena buys one of each and, after applying a discount, pays $50 in total.

How much discount did she receive? (4 points)

A) $10.54 B) $10.74
C) $10.84 D) $11.14

Q18: I. 25% of 56 is 14.
II. 75% of 48 is 36.
III. 18% of 150 is 27.
IV. 50% of 60 is 30.

How many of the above statements are correct? (4 points)

A) 1 B) 2 C) 3 D) 4

Q19: Two line segments, AB and CD, are drawn on grid paper. They cross each other at exactly one point.

Which of the following statements CANNOT be true? (4 points)

A) AB and CD are parallel.
B) AB and CD are perpendicular.
C) AB and CD intersect at a single point.
D) AB and CD are straight lines.

Q20: Emma works at Company A, and Olivia works at Company B.

- Company A's working hours: 7:30 AM – 5:30 PM
- Company B's working hours: 8:30 AM – 6:20 PM

How many more minutes does one of them work compared to the other in a day? (4 points)

A) 15 minutes
B) 10 minutes
C) 30 minutes
D) 45 minutes

Q21: **Which of the following exponential expressions has the greatest value? (5 point)**

A) 2^7 B) 4^3 C) 3^4 D) 1^{313}

Q22:

A = 12 + (35 ÷ 7 – 5)

B = 20 – (4^3 ÷ 16 – 1)

What is the result of A + B based on the given information? (5 points)

A) 24 B) 27 C) 29 D) 37

Q23: Oliver's height is 13 cm shorter than Ethan's height.

Sophia's height is 7 cm shorter than Ethan's height.

Oliver's height is 172 cm.

What is the total height of Sophia and Ethan? (5 points)

A) 348 B) 360 C) 363 D) 365

Q24: Emily bought the following items from a store:

- 3 pencils, each costing $5
- 4 ballpoint pens, each costing $4
- 3 mechanical pencils, each costing $7
- 2 whiteboard markers, each costing $4

Which of the following expressions correctly represents the total amount Emily will pay? (5 points)

A) 4 • (4 + 2) + 3 • (5 + 7)
B) 4 • (2 + 3) + 3 • (5 + 7)
C) (5 + 4 + 7 + 4) • (3 + 4 + 3 + 2)
D) 4 • 7 + 6 • 5

Q25: A number is called a perfect number if the sum of its natural number factors, excluding itself, is equal to the number itself.

According to this definition, which of the following is a perfect number? (5 points)

A) 10 B) 12 C) 15 D) 28

Q26: Ethan gives the following clues about the number he is thinking of:

- It is divisible by 9.
- When divided by 5, the remainder is 1.
- The tens digit is 2.

Which of the following could be Ethan's number? (6 points)

A) 3421 B) 7821
C) 7826 D) 9723

Q27: A school has 8 grade levels, and each grade level has 7 sections.

If the number of students in each class is equal, which of the following could be the total number of students in the school? (6 points)

A) 48 B) 224
C) 568 D) 829

Q28: Which pair of numbers has the least common multiple (LCM) equal to the product of the two numbers? (6 points)

A) 8 and 12
B) 16 and 25
C) 12 and 26
D) 3 and 48

Q29: On a number line, two integers have equal absolute values.

Which of the following cannot be their distance from each other? (6 point)

A) 13 B) 14 C) 98 D) 100

Q30: The number –2▲35 is a four-digit integer.

If –2▲35 < –2437, how many different integer values can ▲ take? (6 point)

A) 3 B) 4 C) 5 D) 6

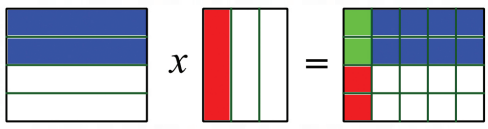
Q31:

$$\left(\frac{3}{4}+\frac{2}{3}\right)-\left(\frac{5}{6}+\frac{7}{12}\right)$$

What is the result of the given operation? (7 point)

A) $-\frac{5}{12}$ B) $-\frac{11}{12}$ C) 0 D) $1\frac{1}{12}$

Q32:



Which of the following represents the operation modeled above? (7 point)

A) $\frac{3}{5}, \frac{1}{2}$ B) $\frac{3}{5}, \frac{1}{3}$

C) $\frac{1}{2}, \frac{1}{3}$ D) $\frac{1}{5}, \frac{1}{3}$

Q33: Sophia bought 6.5 lb of watermelon at $5.75 per lb, 2.5 lb of apples at $3.25 per lb, and 1.5 lb of bananas at $14.25 per lb from Fresh Market.

How much did Sophia pay in total? (7 point)

A) 64.875 B) 66.575
C) 66.875 D) 68.275

Q34: A truck can carry a maximum of 500 kg. It is already loaded with items weighing.

(n + 200) kg. What is the maximum additional weight it can still carry? (7 point)

A) 500 – n B) 300 – n
C) 200 – n D) 100 – n

Q35: In which of the following data sets are the range and the arithmetic mean equal? (7 point)

A) 1 , 4 , 4 , 8
B) 2 , 3 , 5, 8
C) 2 , 6 , 8 , 10
D) 3 , 5 , 7 , 9