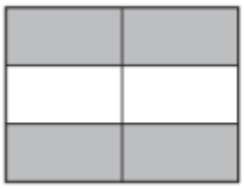
(1) Simplify: $15 - 7 + 4$

A) 11 B) 8 C. 12 D) None of the above

(2) Which number below is an odd number?

A) 15 B) 10 C) 2 D) None of the above

(3) In the picture below, the shaded region represents which fraction?



A) $\frac{1}{2}$ B) $\frac{4}{5}$ C) $\frac{2}{3}$ D) None of the above

(4) What value is nine less than twenty?

A) 29 B) 11 C) 12 D) None of the above

(5) What number replaces the Δ to make the equation $\Delta \div 3 = 6$?

A) 9 B) 12 C) 3 D) None of the above

(6) A number has seven ones, six tens, and nine hundreds. What is the number?

A) 769 B) 796 C) 976 D) None of the above

(7) What is the name of a polygon with six sides?

A) pentagon B) hexagon C) quadrilateral D) None of the above

(8) There are 83 students in 3rd grade. There are 66 students in 2nd grade. How many more students are in the 3rd grade than in the 2nd grade?

A) 17 B) 13 C) 23 D) None of the above

(9) What is the ratio of 10 dogs to 12 cats?

A) $\frac{2}{3}$ B) $\frac{3}{4}$ C) $\frac{5}{6}$ D) None of the above

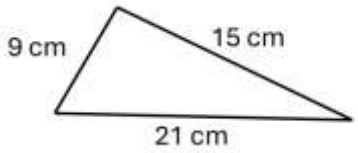
(10) What is the number 8,728 rounded to the nearest ten?

A) 8,700 B) 9,000 C) 8,600 D) None of the above

(11) If $\odot = 5$, and $\boxtimes = 8$, then what is the value of $\boxtimes + \boxtimes + \boxtimes - \odot - \odot$?

A) 14 B) 12 C) 19 D) None of the above

(12) What is the perimeter of the triangle below?



A) 35 cm B) 45 cm C) 135 cm D) None of the above

(13) How many minutes are in 4 hours?
A) 420 minutes B) 360 minutes C) 250 minutes D) None of the above

(14) How many different factors are there for 30?
A) 10 B) 8 C) 12 D) None of the above

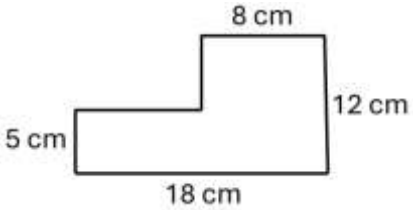
(15) Candy pieces cost 60¢. How many candy pieces can be purchased with $4.20?
A) 6 B) 10 C) 7 D) None of the above

(16) What is the 12th number in the pattern 5, 10, 15, 20, …?
A) 60 B) 65 C) 70 D) None of the above

(17) 3 quarters + 3 dimes + 3 nickels + 3 pennies = _____
A) $1.13 B) $1.23 C) $1.33 D) None of the above

(18) If $16 - n = 9$, then what is the value of $n + 11$?
A) 18 B) 7 C) 14 D) None of the above

(19) What is the area of the shape below?



A) 43 cm^2 B) 186 cm^2 C) 174 cm^2 D) None of the above

(20) What is the standard form of $5 \times 10^3 + 7 \times 10^2 + 4 \times 10^1 + 6 \times 10^0$?
A) 574.6 B) 5,746 C) 57,460 D) None of the above

(21) There are 18 picnic tables at the park. Each table can seat up to 6 people. What is the maximum number of people that can sit at the picnic tables at the park?
A) 24 B) 114 C) 102 D) None of the above

(22) 4 feet = _____ inches

A) 48 B) 64 C) 42 D) None of the above

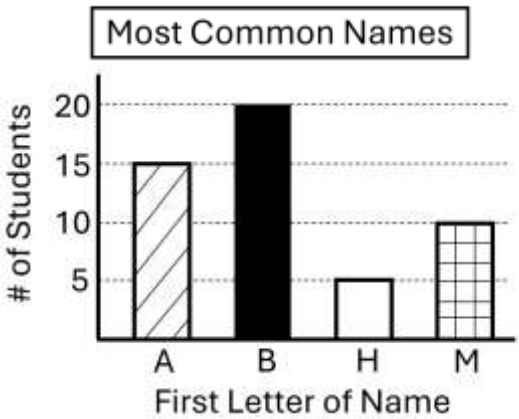
(23) Julia is reading a book that has 144 pages. If Julia reads 9 pages a day, how many days will it take her to finish the book?

A) 14 B) 15 C) 16 D) None of the above

(24) Which comparison is true?

A) 44 < 39 B) 36 > 51 C) 77 > 68 D) None of the above

For problems #25 – #28, please use the bar chart graph below.



(25) Students at York Elementary were asked what they thought was the first letter of the most common names. According to the survey bar graph, how many total students were surveyed?

A) 45 students B) 50 students C) 60 students D) None of the above

(26) Students at York Elementary were asked what they thought was the first letter of the most common names. According to the survey bar graph, how many more students said B than H?

A) 25 students B) 15 students C) 10 students D) None of the above

(27) Students at York Elementary were asked what they thought was the first letter of the most common names. If there are 88 students at the school, how many students did not respond?

A) 18 students B) 32 students C) 28 students D) None of the above

(28) Students at York Elementary were asked what they thought was the first letter of the most common names. If one of the surveyed students who responded were randomly picked, what is the probability that the student chose the letter H?

A) $\frac{2}{5}$ B) $\frac{1}{10}$ C) $\frac{1}{4}$ D) None of the above

(29) Max is 6 feet 3 inches tall. Max's brother is 15 inches shorter than Max. How tall is Max's brother?

A) 5 feet B) 5 feet 9 inches C) 5 feet 7 inches D) None of the above

(30) If $a = 17 - 11 + 13$, and $b = 34 + 8 - 19$, then what is the value of $3 \times a + 2 \times b$?

A) 97 B) 101 C) 103 D) None of the above

2/3 Mathematics Test A Answer Key 2025 – 2026

1) C
2) A
3) C
4) B
5) D
6) D
7) B
8) A
9) C
10) D
11) A
12) B
13) D
14) B
15) C
16) A
17) B
18) A
19) D
20) B
21) D
22) A
23) C
24) C
25) B
26) B
27) D
28) B
29) A
30) C

(1) Simplify: 15 + 3 – 9

A) 11 B) 13 C) 8 D) None of the above

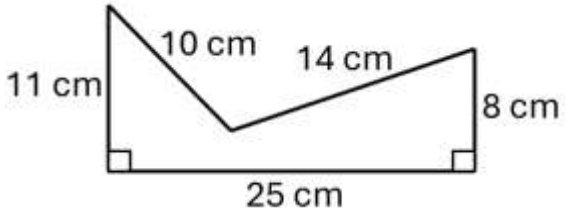
(2) The sum of eighteen and fourteen is equal to what amount?

A) 22 B) 32 C) 34 D) None of the above

(3) Which expression is false?

A) 451 > 333 B) 198 < 301 C) 254 > 401 D) None of the above

(4) What is the perimeter of the shape below?



A) 62 cm B) 68 cm C) 72 cm D) None of the above

(5) Each day after school, Megan walks around her block. It takes her 12 minutes to walk one time around the block. If Megan starts walking at 4:20 pm and stops at 5:44 pm, how many times does Megan walk around her block after school?

A) 7 B) 8 C) 10 D) None of the above

(6) What is the missing number in the pattern? 47, 58, 69, _____ , 91, 102

A) 82 B) 79 C) 80 D) None of the above

(7) 2 yards = _____ inches

A) 72 B) 60 C) 84 D) None of the above

(8) Which of the following is not a prime number?

A) 11 B) 13 C) 15 D) None of the above

(9) What is the number 22,857 rounded to the nearest hundred?

A) 22,800 B) 22,860 C) 23,000 D) None of the above

(10) For one week, Sean jogged 3 miles on Sunday, 4 miles on Monday, 1 mile on Tuesday, 6 miles on Wednesday, 4 miles on Thursday, and 4 miles on Friday. If Sean jogged 30 miles total for the week, how many miles did Sean jog on Saturday?

A) 5 miles B) 6 miles C) 7 miles D) None of the above

(11) What is the standard form of $(6 \times 10{,}000) + (1 \times 1{,}000) + (9 \times 100) + (4 \times 10) + (6 \times 1)$?

A) 619,460 B) 61,946 C) 601,460 D) None of the above

(12) What is the ratio of 16 turtles to 20 frogs?
A) $\frac{2}{3}$ B) $\frac{4}{5}$ C) $\frac{3}{4}$ D) None of the above

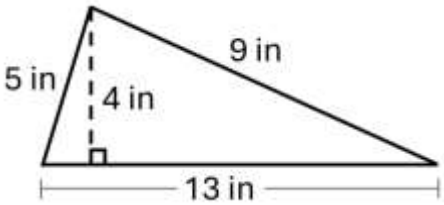
(13) Claire has 4 quarters, 6 dimes, and 20 pennies. Mufti has the same coins Claire has with an additional 7 nickels. How much money does Mufti have?
A) $1.80 B) $2.05 C) $2.15 D) None of the above

(14) What number should replace the ♥ in the equation ♥ + 9 + ♥ = 25, to make the equation true?
A) 11 B) 8 C) 16 D) None of the above

(15) How many more sides does an octagon have than a pentagon?
A) 2 B) 5 C) 4 D) None of the above

(16) Given the number pattern 7, 11, 15, 19, …, what would be the 12th number in the pattern?
A) 51 B) 47 C) 55 D) None of the above

(17) What is the area of the triangle below?



A) 26 in^2 B) 52 in^2 C) 31 in^2 D) None of the above

(18) Marcel started with 44 baseball cards. Marcel gave half of his cards to his friend and then gave five cards to his brother. Marcel's mom then bought him 12 more cards at the store. How many baseball cards does Marcel now have?
A) 29 cards B) 33 cards C) 27 cards D) None of the above

(19) How many different factors are there for 32?
A) 4 B) 8 C) 6 D) None of the above

(20) Giant sour gummy bears cost 35¢. If Devin has $4.00, how many giant sour gummy bears can he buy?
A) 10 B) 11 C) 12 D) None of the above

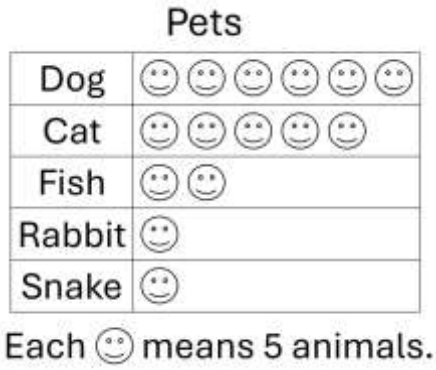
(21) 11 + 12 + 13 + 14 + 15 = _____
A) 64 B) 75 C) 65 D) None of the above

(22) Today is Saturday, October 4th. What day of the week will it be on October 24th?
A) Tuesday B) Friday C) Thursday D) None of the above

(23) Mariam is buying a hotdog for $3.25, some French fries for $2.80, and a drink for $2.50. If Mariam pays with a $20 bill, how much change will she receive?
A) $11.35 B) $12.05 C) $11.45 D) None of the above

(24) To make giant cookies, a recipe calls for 3 cups of sugar to make 6 cookies. How many cups of sugar should be used to increase the recipe to make two dozen giant cookies?
A) 12 cups B) 24 cups C) 18 cups D) None of the above

For #25 – #28, please use the pictograph below.



(25) Steve asked people outside of a grocery store what their favorite pet was. According to the survey pictograph, how many total people were surveyed by Steve?
A) 15 B) 30 C) 75 D) None of the above

(26) Steve asked people outside of a grocery store what their favorite pet was. According to the survey pictograph, what's the difference between the number of people who prefer a pet dog to a pet rabbit?
A) 30 B) 25 C) 20 D) None of the above

(27) Steve asked people outside of a grocery store what their favorite pet was. According to the survey pictograph, how many more people prefer a cat than a fish or snake?
A) 15 B) 10 C) 5 D) None of the above

(28) Steve asked people outside of a grocery store what their favorite pet was. According to the survey Pictograph, if one person was randomly picked that answered the survey, what is the probability that the person would prefer to have a cat as a pet?
A) $\frac{1}{2}$ B) $\frac{1}{4}$ C) $\frac{3}{4}$ D) None of the above

(29) How many multiples of 4 are there between 1 and 50?
A) 12 B) 16 C) 14 D) None of the above

(30) On Saturday morning, a group of boys met at the park to play soccer. After an hour, 9 boys went home to eat lunch, and 5 of these boys returned later to play more soccer. Now, there are a total of 14 boys playing soccer at the park. How many total boys originally met at the park Saturday morning?
A) 16 boys B) 20 boys C) 22 boys D) None of these

2/3 Mathematics Test B Answer Key 2025 – 2026

1) D
2) B
3) C
4) B
5) A
6) C
7) A
8) C
9) D
10) D
11) B
12) B
13) C
14) B
15) D
16) A
17) A
18) A
19) C
20) B
21) C
22) B
23) C
24) A
25) C
26) B
27) B
28) D
29) A
30) D

(1) Simplify: 27 + 35 – 19

A) 43 B) 81 C) 57 D) None of the above

(2) What is the value of fifty-six subtracted from eighty-three?

A) 139 B) 27 C) 33 D) None of the above

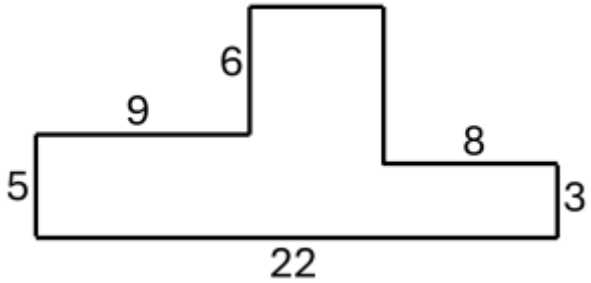
(3) If 28 + ▲ = 44 and 76 – ♥ = 19, then what is the value of ▲ + ▲ + ♥ ?

A) 101 B) 77 C) 88 D) None of the above

(4) What is the number 471,837 rounded to the nearest thousand?

A) 470,000 B) 500,000 C) 472,000 D) None of the above

(5) What is the perimeter of the shape below?



A) 47 units B) 53 units C) 66 units D) None of the above

(6) Shiela has three chickens that each lay 4 eggs per day. At this rate, how many eggs will Shiela have total after a full week?

A) 64 eggs B) 84 eggs C) 102 eggs D) None of the above

(7) What is the missing number in the pattern? 102, 120, _____ , 156, 174, 192

A) 138 B) 136 C) 140 D) None of the above

(8) 96 hours = _____ days

A) 4 B) 5 C) 6 D) None of the above

(9) What is the ratio of 18 giraffes to 27 monkeys?

A) $\frac{1}{4}$ B) $\frac{3}{5}$ C) $\frac{3}{4}$ D) None of the above

(10) What is the sum of the number of sides of an octagon and a decagon?

A) 18 B) 16 C) 14 D) None of the above

(11) How many factors are there for 50?

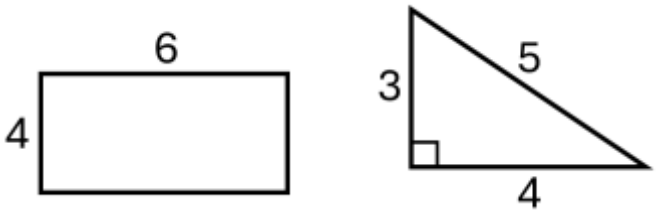
A) 4 B) 6 C) 8 D) None of the above

(12) What number replaces the ◙ to make 34 + ◙ = 77 – 18 a true statement?
A) 30 B) 22 C) 25 D) None of the above

(13) Janelle has five quarters, 3 dimes, 3 nickels, and ten pennies. If Janelle divides her money into three Equal stacks, how much money will be in each stack?
A) 50¢ B) 75¢ C) 85¢ D) None of the above

(14) How many multiples of 7 are there between 10 and 80?
A) 11 B) 12 C) 10 D) None of the above

(15) How much larger is the area of the rectangle than the area of the triangle?



A) 6 units^2 B) 12 units^2 C) 18 units^2 D) None of the above

(16) An airplane travels at 250 miles per hour. How far does the plane travel in 5 hours?
A) 750 miles B) 900 miles C) 1,500 miles D) None of the above

(17) Which comparison is true?
A) $\frac{1}{4} > \frac{1}{2}$ B) $\frac{2}{3} > \frac{3}{4}$ C) $\frac{2}{5} > \frac{1}{10}$ D) None of the above

(18) The circumference of a circle is 10π units. What is the measure of the radius of the circle?
A) 20 units B) 5 units C) 10 units D) None of the above

(19) What is the remainder when 97 is divided by 8?
A) 1 B) 2 C) 3 D) None of these

(20) If no digit may repeat, how many different three-digit numbers can be created using the digits 3, 4, 5, and 6?
A) 12 B) 24 C) 18 D) None of the above

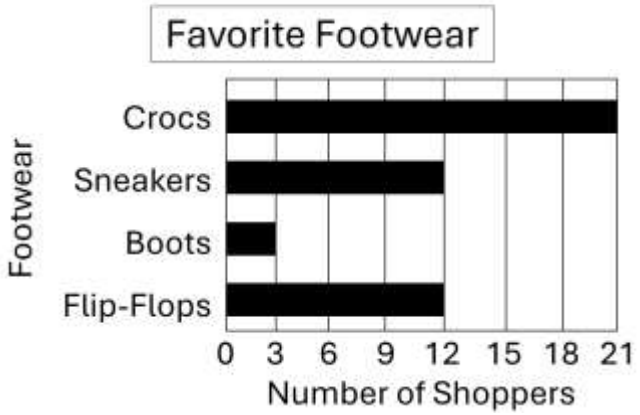
(21) 25 + 26 – 27 + 28 – 29 = _____
A) 135 B) 27 C) 23 D) None of the above

(22) Ahmed starts watching a movie at 6:20 pm. If the movie lasts 145 minutes, at what time will Ahmed finish watching the movie?
A) 7:55 pm B) 6:40 pm C) 6:55 pm D) None of the above

(23) What is the standard form of $5 \times 10^2 + 7 \times 10^1 + 8 \times 10^0$?
A) 5,780 B) 57.8 C) 57,800 D) None of the above

(24) Shantel started with 45 pieces of candy. Shantel gave her friend 7 pieces of candy and ate 4 pieces. With what was remaining, Shantel gave her brother half of her candy. How many pieces of candy does Shantel have remaining?
A) 17 pieces B) 15 pieces C) 19 pieces D) None of the above

For problems #25 – #28, please use the bar chart below.



(25) Shoppers at the Houston Mall were asked what their favorite footwear was. According to the survey bar graph, how many shoppers answered the survey?
A) 52 B) 50 C) 48 D) None of the above

(26) Shoppers at the Houston Mall were asked what their favorite footwear was. According to the survey bar graph, how many more shoppers chose crocs and sneakers than boots and flip-flops?
A) 16 B) 18 C) 12 D) None of the above

(27) Shoppers at the Houston Mall were asked what their favorite footwear was. According to the survey bar graph, what is the ratio of shoppers that chose flip-flops to the total number of shoppers that were surveyed?
A) $\frac{1}{5}$ B) $\frac{1}{4}$ C) $\frac{1}{3}$ D) None of the above

(28) Shoppers at the Houston Mall were asked what their favorite footwear was. According to the survey bar graph, if 124 people were surveyed, how many did not choose one of the footwear options?
A) 84 B) 64 C) 92 D) None of the above

(29) If $n - 2 = 17$, then what is the value of $n + n + n + n$?
A) 76 B) 68 C) 60 D) None of the above

(30) Sofia writes sentences for her writing competition. Each day, Sofia writes 3 more sentences than the previous day. If Sofia writes 4 sentences on the first day, how many sentences in total will she have written after the fifth day?
A) 60 sentences B) 16 sentences C) 48 sentences D) None of the above

2/3 Mathematics Test C Answer Key 2025 – 2026

1) A
2) B
3) D
4) C
5) C
6) B
7) A
8) A
9) D
10) A
11) B
12) C
13) D
14) C
15) C
16) D
17) C
18) B
19) A
20) B
21) C
22) D
23) D
24) A
25) C
26) B
27) B
28) D
29) A
30) D

4th and 5th Grade
UIL A+ Elementary Math Tests

Disclaimer & Notice

These tests were created for use at past A+ Academics events. They are being shared here for reference and instructional purposes only.

Please note:

- These tests are **not official UIL releases**.
- While originally used in competition, they have **not been re-proofed** for this publication. Typos, formatting inconsistencies, or other minor errors may be present.
- Educators are encouraged to review the material carefully before reusing or distributing it.

We hope these resources are useful in supporting math enrichment and UIL preparation.

(1) Simplify:
A) B) 11 C) 13 D) None of the above

(2) 6 quarters + 8 dimes + 3 nickels + 10 pennies = _____
A) $2.55 B) $2.35 C) $2.25 D) None of the above

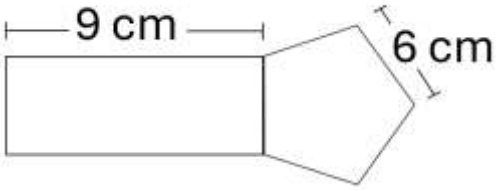
(3) What is the remainder when the number 82 is divided by the number 4?
A) 1 B) 2 C) 3 D) None of the above

(4) If 9, what is the value of ?
A) 10 B) 52 C) 25 D) None of the above

(5) What is the greatest prime number less than 40?
A) 39 B) 41 C) 35 D) None of the above

(6) The product of twenty-four and fifteen is equal to what value?
A) 320 B) 280 C) 340 D) None of the above

(7) A rectangle and a regular pentagon share a side. What is the perimeter of the new shape?



A) 60 cm B) 48 cm C) 54 cm D) None of the above

(8) Jillian started a movie at 7:45 pm. If the movie lasted 115 minutes, at what time did the movie end?
A) 9:40 pm B) 9:25 pm C) 9:35 pm D) None of the above

(9) How many factors does the number 120 have?
A) 10 B) 12 C) 16 D) None of the above

(10) What value is 25% of 96?
A) 24 B) 28 C) 26 D) None of the above

(11) Avery wants to buy chocolate candies that cost 55¢ each. What is the most pieces of chocolate candies that Avery can buy with a $10 bill?
A) 17 B) 18 C) 19 D) None of the above

(12) What is the next term of the sequence 17, 29, 41, 53, 65, 77, 89, …?
A) 96 B) 98 C) 99 D) None of the above

(13) What is the sum of the number of sides of a pentagon and an octagon?
A) 12 B) 11 C) 13 D) None of the above

(14) 12,000 meters = _____ kilometers
A) 120 B) 12 C) 1.2 D) None of the above

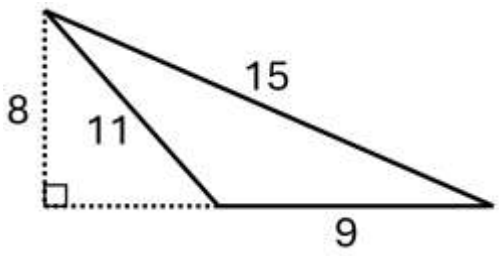
(15) Evaluate b, for $a = 3$ and $b = 10$.
A) 24 B) 62 C) 72 D) None of the above

(16) If six movie tickets cost $57.00, what is the unit rate per ticket?
A) $10.50 B) $11.25 C) $9.50 D) None of the above

(17) 2 cups = _____ ounces
A) 12 B) 16 C) 8 D) None of the above

(18) Hailey can make 4 bracelets in 15 minutes. How many bracelets can Hailey make in 2 hours?
A) 32 B) 16 C) 48 D) None of the above

(19) What is the area of the triangle?



A) 36 units^2 B) 44 units^2 C) 43 units^2 D) None of the above

(20) 40% = _____ (fraction)
A) – B) – C) — D) None of the above

(21) What is the sum of the digits of the sum of 244 and 319?
A) 23 B) 14 C) 17 D) None of the above

(22) Which of the following is not true?
A) 76 > 84 B) 62 < 90 C) 58 > 38 D) None of the above

(23) What is the number 128,452 rounded to the nearest hundred?
A) 128,400 B) 130,000 C) 128,500 D) None of the above

(24) If $4a – 1 = 23$, then what is the value of $15 – 2a$?
A) 3 B) 4 C) 7 D) None of the above

(25) On Sunday, Kiely ate 3 grapes. On Monday, Kiely ate 5 grapes. On Tuesday, Kiely ate 7 grapes. If this pattern continues, how many grapes will Kiely eat on Saturday?

A) 15 B) 16 C) 13 D) None of the above

For problems #26 – #29, please use the frequency table below.

5th Grade Field Day Spectators

Age (years)	Number of Spectators
0 – 10	𝍸 II
11 – 20	𝍸 𝍸 𝍸 𝍸
21 – 30	𝍸 𝍸 II
31 – 40	𝍸 𝍸 𝍸

(26) The frequency table shows the numbers of spectators in different age ranges that attended the 5th grade field day. How many total spectators attended the field day?

A) 52 B) 56 C) 58 D) None of the above

(27) The frequency table shows the numbers of spectators in different age ranges that attended the 5th grade field day. How many more spectators were 20 years old or younger than were between the ages 21 – 30?

A) 8 B) 15 C) 27 D) None of the above

(28) The frequency table shows the numbers of spectators in different age ranges that attended the 5th grade field day. What is the ratio of the number of spectators between the ages of 0 – 10 to the number of spectators between the ages of 21 – 30?

A) – B) – C) – D) None of the above

(29) The frequency table shows the numbers of spectators in different age ranges that attended the 5th grade field day. What is the product of the number of spectators between the ages of 11 – 20 and the number of spectators between the ages of 31 – 40?

A) 280 B) 240 C) 300 D) None of the above

(30) If the sales tax for an item is 7.5%, what is the total price plus tax for an item that costs $18.00?

A) $19.35 B) $18.85 C) $19.15 D) None of the above

(31) If – –, as an improper fraction, then what is the value of 87 – *n*?

A) 41 B) 34 C) 39 D) None of the above

(32) What is the greatest common factor of the numbers 24 and 36?

A) 6 B) 2 C) 12 D) None of the above

(33) Each letter of the word FRACTION is written on a tile and placed inside a bag. What is the probability of reaching in the bag and drawing a vowel?

A) – B) – C) – D) None of the above

(34) There were 40 members in the school math club last year. The number of members increased by 40% this year. How many members are there in the school math club this year?

A) 60 B) 54 C) 56 D) None of the above

(35) How many rectangles are in the picture below?

A) 4 B) 8 C) 6 D) None of the above

(36) Gina and Maria started studying for their test at 6:20 pm. Maria studied for 45 minutes. Gina studies 18 minutes longer than Maria. At what time did Gina finish studying?

A) 7:03 pm B) 7:13 pm C) 7:18 pm D) None of the above

(37) What is the measure of the radius of a circle with a circumference of inches?

A) 16 inches B) 32 inches C) 8 inches D) None of the above

(38) If Grayson saves 10% of his paycheck each week, and his weekly paycheck is $450, how much will he have saved in 8 weeks?

A) $360 B) $420 C) $380 D) None of the above

(39) – – = _____

A) – B) — C) — D) None of the above

(40) How many factors of 48 are also multiples of 3?

A) 4 B) 5 C) 6 D) None of the above

4/5 Mathematics Test A Answer Key

1) B
2) A
3) B
4) C
5) D
6) D
7) B
8) A
9) C
10) A
11) B
12) D
13) C
14) B
15) D
16) C
17) B
18) A
19) A
20) B
21) B
22) A
23) C
24) A
25) A
26) D
27) B
28) D
29) C
30) A
31) B
32) C
33) B
34) C
35) B
36) D
37) C
38) A
39) C
40) B

(1) Simplify:
A) 64 B) 51 C) 41 D) None of the above

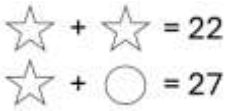
(2) In a pond, there are 24 frogs and 36 fish. What is the ratio of fish to frogs in the pond?
A) 2:3 B) 3:2 C) 1:2 D) None of the above

(3) Last year, Belinda donated $435.80 to charity and Dan donated $277.95 to charity. How much more money did Belinda donate than Dan?
A) $149.35 B) $155.65 C) $157.85 D) None of the above

(4) If x is 9 more than y and y is twice z, what is the value of x, if $z = 16$?
A) 32 B) 17 C) 41 D) None of the above

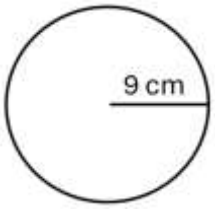
(5) What is the product of the number of sides of a hexagon and the number of sides of an octagon?
A) 48 B) 40 C) 14 D) None of the above

(6) Using the picture below, what is the value of the circle?



A) 14 B) 18 C) 16 D) None of the above

(7) What is the circumference of the circle?



A) cm B) cm C) cm D) None of the above

(8) What is the sum of the positive factors of 54?
A) 120 B) 124 C) 88 D) None of the above

(9) 200 centigrams + 5,000 milligrams = _____ grams
A) 25 B) 52 C) 7 D) None of the above

(10) 0.54 = _____ (fraction)
A) — B) — C) – D) None of the above

(11) What is the 15th term of the sequence 12, 19, 26, 33, 40, …?
A) 103 B) 110 C) 117 D) None of the above

(12) Sally opens her book and the sum of the two page numbers she sees is 115. What is the larger of the two page numbers?

A) 56 B) 57 C) 55 D) None of the above

(13) What is the average of 12, 18, 24, 12, 12, and 30?

A) 12 B) 15 C) 16 D) None of the above

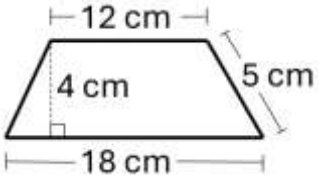
(14) 16 quarters + 18 dimes + 10 nickels + 5 pennies = _____ quarters + 60 dimes + 10 pennies

A) 1 B) 5 C) 8 D) None of the above

(15) What is the sum of the four prime numbers between 10 and 20?

A) 58 B) 60 C) 62 D) None of the above

(16) What is the area of the isosceles trapezoid?



A) 60 cm^2 B) 44 cm^2 C) 120 cm^2 D) None of the above

(17) If choco's cost 18¢, what is the most amount of choco's Lindsey can buy with a $5 bill?

A) 25 B) 26 C) 27 D) None of the above

(18) What value is ½ of ½ of 50% of 4,000?

A) 1,000 B) 250 C) 500 D) None of the above

(19) If today is Monday, March 14th, what day of the week will be on March 31st?

A) Wednesday B) Tuesday C) Friday D) None of the above

(20) Evaluate cd, for $a = 4$, $b = 5$, $c = 2$, and $d = 10$.

A) 100 B) 1 C) 20 D) None of the above

(21) Jimmy scored 192 points this basketball season that consisted of 8 games. If Jimmy scored the same amount of points in each game, how many points did Jimmy score in each game?

A) 18 B) 22 C) 26 D) None of the above

(22) 10,560 feet = _____ miles

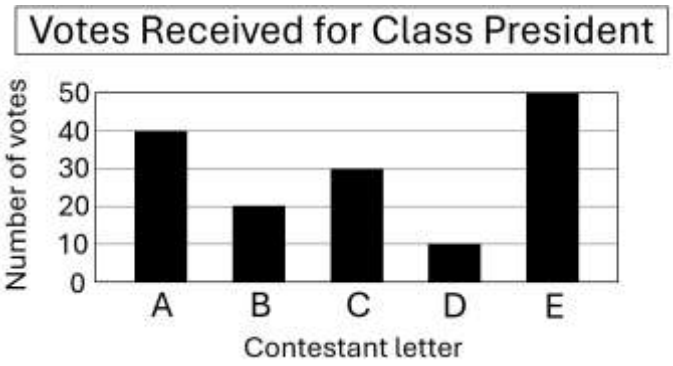
A) 3 B) 4 C) 1 D) None of the above

(23) How many factors of 96 are also multiples of 4?

A) 6 B) 8 C) 12 D) None of the above

(24) A rectangle has vertices located at (3, 2), (9, 2), (9, 7), and (3, 7). What is the area of the rectangle?
A) 30 units^2 B) 36 units^2 C) 22 units^2 D) None of the above

For #25 – #29, please use the bar graph below.



(25) Five students ran for class president. The bar graph shows the number of votes each contestant received. How many total students voted in the election?
A) 120 B) 200 C) 150 D) None of the above

(26) Five students ran for class president. The bar graph shows the number of votes each contestant received. What percentage of students voted for contestant C?
A) – B) – C) – D) None of the above

(27) Five students ran for class president. The bar graph shows the number of votes each contestant received. What is the product of the number of votes contestant A, C, and D received?
A) 12,000 B) 1,200 C) 120,000 D) None of the above

(28) Five students ran for class president. The bar graph shows the number of votes each contestant received. What is the ratio of number of votes contestant B received to the number of votes contestants C and E received together?
A) – B) – C) – D) None of the above

(29) What is the perimeter of a square that has an area of 144 cm^2?
A) 72 cm B) 36 cm C) 48 cm D) None of the above

(30) If $3n + 7 = 22$, then what is the value of $n^2 + n$?
A) 15 B) 30 C) 42 D) None of the above

(31) Mike must choose an outfit to wear with his new jeans that consists of a shirt, tie, and a belt. If Mike has 5 shirts, 8 ties and 3 belts, how many outfits are possible that Mike can choose from?
A) 16 B) 40 C) 60 D) None of the above

(32) If one-dozen donuts cost $13.44, how much will 8 donuts cost?
A) $8.76 B) $8.96 C) $9.26 D) None of the above

(33) – – = _____
A) — B) — C) – D) None of the above

(34) In Roberts family, there are 52 adults. Every adult owns a dog, cat, or both. If 29 adults own a cat, 34 adults own a dog, and 11 adults own both a cat and a dog, how many adults own only a cat?
A) 15 B) 29 C) 18 D) None of the above

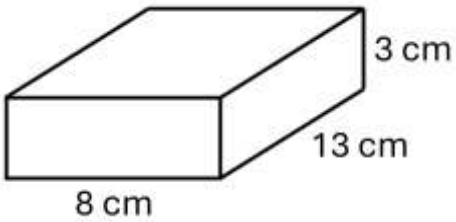
(35) Gina's salary will increase 5% each year. If Gina's salary for 2024 is $40,000, what will her salary be in 2026?
A) $42,000 B) $44,000 C) $44,200 D) None of the above

(36) Michelle ran 6 miles in one hour. Janice ran 2½ miles in 15 minutes. If Michelle and Janice ran only one mile, how many minutes faster would Janice finish?
A) 3 minutes B) 4 minutes C) 2 minutes D) None of the above

(37) 18^2 = _____
A) 36 B) 364 C) 324 D) None of the above

(38) What is the sum of the largest palindrome less than 5,000 and the least palindrome greater than 5,000?
A) 9,999 B) 10,109 C) 10,000 D) None of the above

(39) What is the volume of the rectangular prism?



A) 312 cm^3 B) 334 cm^3 C) 260 cm^3 D) None of the above

(40) At Peppi's Pizza, one large pizza is cut into eight equal slices and one medium pizza is cut into six equal slices. If one large pizza costs $20.72, and one medium pizza costs $13.26, how much cheaper is a medium slice of pizza than a large slice of pizza?
A) 26¢ B) 38¢ C) 34¢ D) None of the above

4/5 Mathematics Test C Answer Key

1) B
2) B
3) C
4) C
5) A
6) C
7) C
8) A
9) C
10) A
11) B
12) D
13) D
14) A
15) B
16) A
17) C
18) C
19) D
20) A
21) D
22) D
23) B
24) A
25) C
26) D
27) A
28) D
29) C
30) B
31) D
32) B
33) D
34) C
35) D
36) B
37) C
38) A
39) A
40) B

INVITATIONAL 2023 - 2024

A+ ACADEMICS

Mathematics

DO NOT OPEN TEST
UNTIL TOLD TO DO SO

(1) Evaluate: $-9 \times (4 - 5) \times -7$

A) -1 B) 2 C) 287 D) None of the above

(2) The product of thirty-three and fifteen is equal to what amount?

A) 495 B) 450 C) 145 D) None of the above

(3) What is the ratio in fl oz. between 2 pints to one gallon?

A) $\frac{3}{8}$ B) $\frac{1}{4}$ C) $\frac{3}{4}$ D) None of the above

(4) 25 m^2 = _____ cm^2?

A) 2500 B) 25000 C) 250000 D) None of the above

(5) What is the volume of a cylider with a diameter of 3-inches and a height of 5?

A) 9π in^3 B) 25π in^3 C) 45π in^3 D) None of the above

(6) How many minutes are between 12:00 AM and 1:00 PM of the same day?

A) 60minutes B) 600 minutes C) 780 minutes D) None of the above

(7) If the sales tax for an item is 8.25%, what is the total price including sales tax for an item that costs $80?

A) $80.00 B) $6.60 C) $86.60 D) None of the above

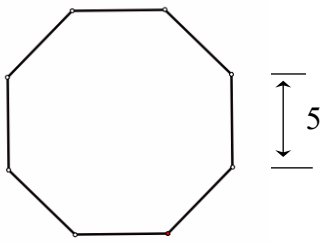
(8) How many distinct prime factors does 64 have?

A) 1 B) 2 C) 3 D) None of the above

(9) 20 meters per second (m/s) = _____ kilometers per hour (kmph).

A) 72 kmph B) 2000 kmph C) 60 kmph D) None of the above

(10) What is the perimeter of the figure to the right?



A) 40 D) None of the above

B) 45

C) 50

(11) A candy bar costs $1.25. What is the maximum amounnt of candy bars can be purchased with $20?

A) 14 B) 16 C) 18 D) None of the above

(12) A horse has a mass of 350kg. What is the mass of the horse in hectograms?

A) 3,500 hg
B) 35,000 hg
C) 350,000 hg
D) None of the above

(13) Vintage cars are all the rage right now. A vintage car is now worth $25,000. If this car has gone up 25% the past year, how much was it previously worth?
A) $15,000 B) $20,000 C) $25,000 D) None of the above

(14) Bob started a lemonade stand. He spent $20 for supplies. He sells each glass for 25¢. How many glasses does he need to sell to make a profit of 25%?
A) 20 B) 50 C) 100 D) None of the above

(15) The numbers for a pattern. 1, 4, 9, 16,... Which of the numbers below would be part of the pattern?
A) 49 B) 24 C) 66 D) None of the above

(16) If $28 - 4a = 4$, what does ***a*** equal?
A) 8 B) 5 C) 4 D) None of the above

(17) If $9a = 1$, what does ***a*** equal?
A) 9 B) $\frac{1}{9}$ C) 0 D) None of the above

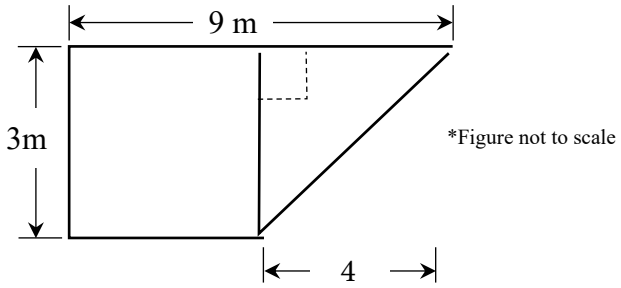
(18) If two numbers differ by 7 and their sum is 49, what is the larger number?
A) 28 B) 44 C) 14 D) None of the above

(19) Eight friends have an average of five toy cars each. Kevin joins them, and now the average is 7 toy cars each. How many toy cars does Kevin have?
A) 23 B) 9 C) 17 D) None of the above

(20) Suppose today is Saturday. In all, how many Fridays are there in the next 50 days?
A) 7 B) 8 C) 9 D) None of the above

(21) One gallon = _____ fl oz.
A) 64 fl oz B) 128 fl oz C) 256 fl oz D) None of the above

(22) What is the perimeter of the figure to the right?
A) 16 m
B) 21 m
C) 22 m
D) None of the above

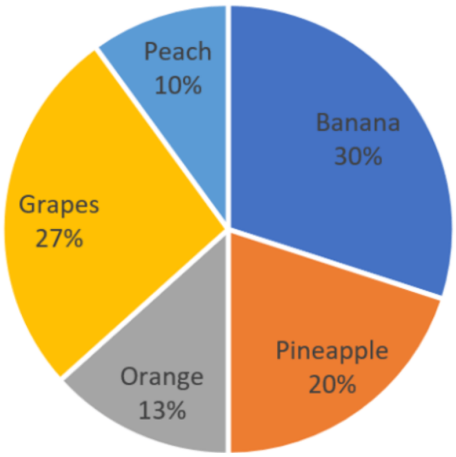


(23) Jackie set a school record for most points in a single basketball game when his team scored 81 points. The seven other players on his team averaged 8 points each. How many points did Jackie score?
A) 25 B) 38 C) 45 D) None of the above

(24) Zach buys two hot dogs and three drinks for $14. Sebastian bought three drinks and 5 hot dogs for $26. How much does one hot dog cost?

A) 3 B) 4 C) 5 D) None of the above

For problems #25 – #29 please use the chart below.



(25) The above chart shows the % of fruits Sam sold in one day at her fruit shop. If a total of 150 kg of fruit was sold, how many kg of banana's were sold that day?

A) 30 kg B) 45 kg C) 60 kg D) None of the above

(26) Sam sold 200kg of fruit, what is the difference between the sales in kg of pineapple and oranges?

A) 27 kg B) 14 kg C) 21 kg D) None of the above

(27) Sam sold a total of 100 kg of fruit. If each orange weighs .5kg, how many oranges did Sam sell?

A) 26 oranges B) 50 oranges C) 13 oranges D) None of the above

(28) Calculate the central angle for the "grapes" fruit.

A) 36° B) 27° C) 90° D) None of the above

(29) What was the thrid most popular fruit sold at Cindy's fruit shop?

A) Grapes B) Banana C) Peach D) None of the above

(30) If $x = 7.5$ and $4x - 15 = y$, what is the value of y?

A) 10 B) 30 C) 15 D) None of the above

(31) How many 2-digit odd numbers are greater than 30?

A) 30 B) 35 C) 69 D) None of the above

(32) If the legs of a right triangle are 12 and 5, then the hypotenuse is

A) 20 B) 8 C) 13 D) None of the above

(33) Two identical squares, each with area 289 are touch each other on one side only. What is the perimeter of the resulting rectangle?

A) 17 B) 102 C) 136 D) None of the above

(34) What is the probability of rolling a pair of normal six sided dice and getting a sum of 5?

A) $\frac{1}{9}$ B) $\frac{3}{8}$ C) $\frac{5}{6}$ D) None of the above

(35) Susie flew 4 hours and 20 minutes from Houston to San Fransisco. If her flight was at 9:40 am Houston local time what time did she make it to San Fransisco local time?

A) 2:00 PM B) 12:00 AM C) 12:00 PM D) None of the above

(36) Tracy's Trophies charges by the letter for engraving. There is one fee for each vowel and a different fee for each consonant. CAROL costs $31 to engrave. GABRIEL costs $43 to engrave. How much does BRIDGET cost to engave?

A) $42 B) $43 C) $44 D) None of the above

(37) Four volunteers can pack 12 boxes every 30 minutes. How many additional volunteers are needed to pack 72 boxes every hour? Assume all volunteers work at the same rate

A) 4 B) 8 C) 12 D) None of the above

(38) 5 is to n as 12 is to 36. What is n?

A) 12 B) 36 C) 15 D) None of the above

(39) How many 3-digit numbers have exactly 2 digits that are the same?

A) 220 B) 243 C) 252 D) None of the above

(40) Flora has lots of different colored flowers. 4 green flowers , 4 yellow flowers, 4 red flowers and 4 blue flowers. How many colored flowers does Flora have in all?

A) 4 B) 12 C) 16 D) None of the above

4/5 Invitational 2023-2024 Mathematics Answer Key
Set B

1) D
2) A
3) B
4) C
5) C
6) C
7) C
8) A
9) A
10) A
11) B
12) A
13) B
14) C
15) A
16) D
17) B
18) A
19) A
20) A
21) B
22) C
23) A
24) B
25) B
26) B
27) A
28) D
29) D
30) C
31) B
32) C
33) B
34) A
35) C
36) D
37) B
38) C
39) B
40) C

Mathematics

DO NOT OPEN TEST
UNTIL TOLD TO DO SO

(1) Evaluate: $-3 \times (6 - 5 \times 3)$
A) -9 B) 27 C) -27 D) None of the above

(2) The product of thirty-three and twelve is equal to what amount?
A) 396 B) 366 C) 369 D) None of the above

(3) What is the ratio of ounces in two pints to one gallon?
A) $\frac{1}{4}$ B) $\frac{1}{8}$ C) $\frac{8}{1}$ D) None of the above

(4) 25 square centimeters = _____square meters.
A) 0.025 B) 0.0025 C) 0.00025 D) None of the above

(5) What is the area of a circle with a radius of 4-inches?
A) 4π in^2 B) 16π in^2 C) 4 in^2 D) None of the above

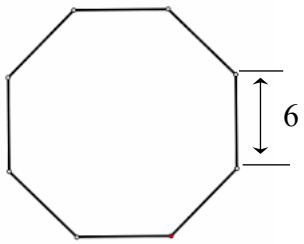
(6) How many minutes are between 9:00 AM and 5:15 PM of the same day?
A) 85 minutes B) 405 minutes C) 495 minutes D) None of the above

(7) If the sales tax for an item is $8\frac{1}{4}$%, what is the total price plus sales tax for an item that costs $20?
A) $16.50 B) $1.65 C) $21.65 D) None of the above

(8) How many distinct prime factors does 36 have?
A) 6 B) 5 C) 2 D) None of the above

(9) 44 feet per second (ft/s) = _____ miles per hour (mph).
A) 10 mph B) 30 mph C) 60 mph D) None of the above

(10) What is the perimeter of the figure to the right?



A) 36 D) None of the above

B) 48

C) 6

(11) A can of soda costs 75¢. How many of these sodas can be purchased with $10?
A) 14 B) 13 C) 12 D) None of the above

(12) Jack picked up 30 easter eggs with a mass of 1hectogram each. What is the mass of all his eggs in centigrams?
A) 3,000 cg
B) 30,000 cg
C) 300,000 cg
D) None of the above

(13) This season, a basketball team increases ticket prices by 100% over the previous season's prices. How much will a ticket cost this season that had a price of $10 the previous season?
A) $110.00 B) $11.00 C) $20.00 D) None of the above

(14) Jill started a lemonade stand. She spends $15 for supplies. She sells each glass for 75¢. How many glasses does she need to sell to break even?
A) 20 B) 30 C) 33 D) None of the above

(15) The numbers for a pattern. 6, 27, 64, 125,... Which of the number below would NOT be part of the pattern?
A) 343 B) 729 C) 216 D) None of the above

(16) If $28 - 6a = 4$, what does ***a*** equal?
A) 16 B) 18 C) 4 D) None of the above

(17) If $30 - 5a = 5$, what does ***a*** equal?
A) 5 B) 25 C) 0 D) None of the above

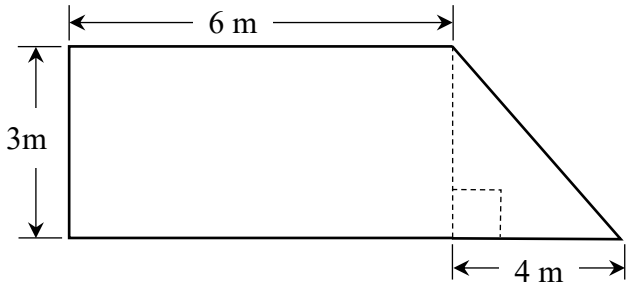
(18) If two numbers differ by 2 and their sum is 14, what is the larger number?
A) 8 B) 14 C) 6 D) None of the above

(19) A rectangle and a square have equal perimeters. The area of the square is 16 square inches and the length of one side of the rectangle is 5 inches. What is the width of one side the rectangle?
A) 10-in. B) 6-in. C) 3-in. D) None of the above

(20) Suppose today is Tuesday. In all, how many Fridays are there in the next 53 days?
A) 7 B) 8 C) 9 D) None of the above

(21) One mile = _____ feet.
A) 440 feet B) 5280 feet C) 1320 feet D) 1760 feet

(22) What is the perimeter of the figure to the right?
A) 24 m
B) 30 m
C) 13 m
D) None of the above



(23) Frank set a school record for most points in a single basketball game when his team scored 84 points. The six other players on her team averaged 2.5 points each. How many points did Frank's teamates score?
A) 42 B) 69 C) 15 D) None of the above

(24) What is the sum of the two largest prime numbers less than 24?
A) 3 B) 36 C) 41 D) None of the above

For problems #25 – #29 please use the chart below.

Miles Run Each Week

Week	Miles
1	3
2	5
3	7
4	9

(25) Flora runs for exercise. The table above shows the total number of miles she ran through the end of each week. If the pattern continued how many miles did she run by the end of the twentieth week?
A) 40 miles B) 41 miles C) 43 miles D) 45 miles

(26) Flora runs for exercise. The table above shows the total number of miles she ran through the end of each week. What is the mean number of miles she ran in the first three weeks?
A) 15 miles B) 10 miles C) 5 miles D) 3 miles

(27) Flora runs for exercise. The table above shows the total number of miles she ran through the end of each week. What is the total number of miles she ran in the first five weeks?
A) 30 miles B) 31 miles C) 32 miles D) 35 miles

(28) Flora runs for exercise. The table above shows the total number of miles she ran through the end of each week. If she took a total of 10 hours to run her total miles during week 17, what was her average speed for that week in miles per hour (mph)?
A) $3\frac{1}{2}$ mph B) 4 mph C) $4\frac{1}{2}$ mph D) 5 mph

(29) Flora runs for exercise. The table above shows the total number of miles she ran through the end of each week. If the length of a single lap around the local high school track is 440 yards and there are 1,760 yard per mile, how many laps did Amanda run in week 7?
A) 4 laps B) 8 laps C) 16 laps D) 60 laps

(30) If $x = 5$ and $3x - 2 = y$, what is the value of y?
A) 10 B) 13 C) 17 D) None of the above

(31) A pro basketball player's autograph was once worth $500. The autograph then dropped 50% in value. If it then increased by 20%, what is its value now?
A) $280 B) $470 C) $300 D) None of the above

(32) A monthly membership to the gym costs $150. A total of 75 people paid prepaid for a year. How much did the gym make from these 75 people?
A) $11,250 B) $121,500 C) $135,000 D) None of the above

(33) David is going to the store. Halfway to the store, he then realizes he forgot his wallet! He runs back 3 km to go back home to get his wallet. How many kilometers away from his home is the store?
A) 3 km B) 6 km C) 9 km D) None of the above

(34) Teachers prepared 888 water balloons for the students at field day. Each water balloon was filled with 4 fl oz of water. How much water are in the 888 water baloons
A) 222 qt. B) 111 pints. C) 3552 cups. D) None of the above

(35) Jasmine and Miguel ran the Houston Marathon which started at 7:30AM. Miguel finished the marathon in 4 hours and 20 minutes. Jasmine finished the marathon 30 minutes after Miguel did. At what time did Jasmine finish the marathon?
A) 12:20 AM B) 1:20 AM C) 1:20 PM D) None of the above

(36) Gina is taller than Henry but shorter than Jennie. Ivan is taller than Katie but shorter than Gina. Who is the tallest of these five people?
A) Gina B) Ivan C) Jennie D) Katie

(37) A coffeemaker can brew a 4oz coffee 12 times before needing more water. How many cups of water is needed to fill the reservoir?
A) 12 cups B) 6 cups C) 4 cups D) None of the above

(38) If $a + 5 = 14$, what is the value of $3a - 4$?
A) 19 B) 23 C) 20 D) None of the above

(39) What is the 4th prime number?
A) 11 B) 13 C) 7 D) None of the above

(40) Which of the following pairs of numbers has a greatest common factor of 10?
A) 2000 and 200 B) 200 and 500 C) 20 and 30 D) None of the above

4/5 Mathematics Answer Key

1) B
2) A
3) A
4) B
5) B
6) C
7) C
8) C
9) B
10) B
11) B
12) C
13) C
14) A
15) D
16) C
17) A
18) A
19) C
20) B
21) B
22) A
23) C
24) D
25) B
26) C
27) D
28) A
29) D
30) B
31) C
32) C
33) B
34) D
35) D
36) C
37) B
38) B
39) C
40) C

DISTRICTS 2022-2023

ACADEMICS

Mathematics

DO NOT OPEN TEST
UNTIL TOLD TO DO SO

(1) Evaluate: $-3 \times (6 - 5) \times 3$

A) -9 B) 27 C) -27 D) None of the above

(2) The product of twenty-two and twelve is equal to what amount?

A) 220 B) 36 C) 264 D) None of the above

(3) What is the ratio of ounces in two quarts to one gallon?

A) $\frac{1}{2}$ B) $\frac{1}{4}$ C) $\frac{2}{1}$ D) None of the above

(4) 25 sq ft = _____ sq in?

A) 360 B) 3600 C) 36000 D) None of the above

(5) What is the area of a circle with a diameter of 4-inches?

A) 4π in^2 B) 16π in^2 C) 2π in^2 D) None of the above

(6) How many minutes are between 9:00 AM and 5:15 PM of the same day?

A) 85 minutes B) 405 minutes C) 495 minutes D) None of the above

(7) If the sales tax for an item is 8.25%, what is the total price not including sales tax for an item that costs $20?

A) $20.00 B) $1.65 C) $21.65 D) None of the above

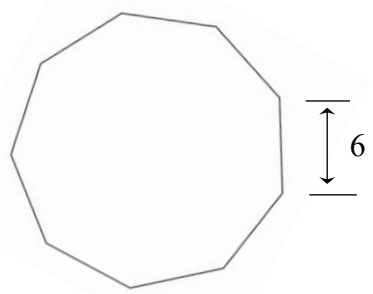
(8) How many distinct prime factors does 56 have?

A) 6 B) 5 C) 2 D) None of the above

(9) 88 feet per second (ft/s) = _____ miles per hour (mph).

A) 10 mph B) 30 mph C) 60 mph D) None of the above

(10) What is the perimeter of the figure to the right?



A) 36 D) None of the above

B) 48

C) 60

(11) A candy bar costs 125¢. How many of these candy bars can be purchased with $15?

A) 14 B) 13 C) 12 D) None of the above

(12) Jack's dog is 10kg. What is the mass of his dog in hectograms?

A) 100 hg
B) 1,000 hg
C) 10,000 hg
D) None of the above

(13) This season, a basketball team increases ticket prices by 120% over the previous season's prices. How much will a ticket cost this season that had a price of $10 the previous season?
A) $14.00 B) $12.00 C) $22.00 D) None of the above

(14) Jill started a lemonade stand. She spends $15 for supplies. She sells each glass for 75¢. How many glasses does she need to sell to make a profit of 50%?
A) 20 B) 30 C) 33 D) None of the above

(15) The numbers for a pattern. 1, 3, 6, 10,... Which of the number below would NOT be part of the pattern?
A) 21 B) 45 C) 55 D) None of the above

(16) If $69 - 4a = 5$, what does $\boldsymbol{a}$ equal?
A) 16 B) 17 C) 18 D) None of the above

(17) If $30a = 5$, what does $\boldsymbol{a}$ equal?
A) 6 B) $\frac{1}{6}$ C) 0 D) None of the above

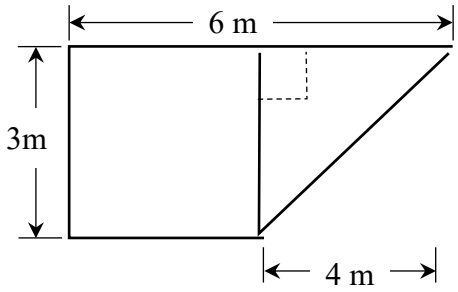
(18) If two numbers differ by 5 and their sum is 15, what is the smaller number?
A) 0 B) 5 C) 10 D) None of the above

(19) A rectangle and a square have equal perimeters. The area of the square is 25 square inches and the length of one side of the rectangle is 5 inches. What is the width of the other side the rectangle?
A) 5-in. B) 6-in. C) 10-in. D) None of the above

(20) Suppose today is Saturday. In all, how many Fridays are there in the next 69 days?
A) 7 B) 8 C) 9 D) None of the above

(21) One mile = _____ yards.
A) 440 yd B) 5280 yd C) 1760 yd D) None of the above

(22) What is the perimeter of the figure to the right?
A) 18 m
B) 16 m
C) 15 m
D) None of the above

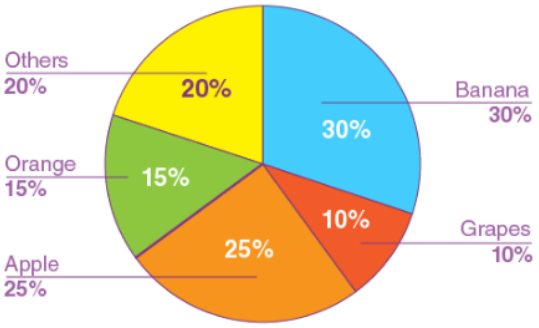


(23) Frank set a school record for most points in a single basketball game when his team scored 89 points. The eight other players on her team averaged 2.5 points each. How many points did Frank score?
A) 20 B) 69 C) 5 D) None of the above

(24) What is the sum of the two largest prime numbers less than 6?
A) 3 B) 5 C) 2 D) None of the above

For problems #25 – #29 please use the chart below.

Sale of different fruits in Cindy's Shop



(25) The above chart shows the % of fruits Cindy sold in one day at her fruit shop. If a total of 500kg of fruit was sold, how many kg of banana's were sold that day?
A) 30 kg B) 150 kg C) 300 kg D) None of the above

(26) Cindy sold 1200kg of fruit, what is the difference between the sales in kg of grapes and oranges?

A) 60 kg B) 75 kg C) 5 kg D) None of the above

(27) Cindy sold a total of 800 kg of fruit. If each apple weighs .5kg, how many apples did Cindy sell?

A) 250 apples B) 200 apples C) 400 apples D) None of the above

(28) Calculate the central angle for the "other" fruit.

A) 20° B) 36° C) 72° D) None of the above

(29) What was the second most popular fruit sold at Cindy's fruit shop?

A) Other B) Banana C) Apple D) None of the above

(30) If $x = 10$ and $3x - 15 = y$, what is the value of y?
A) 10 B) 30 C) 15 D) None of the above

(31) A pro baseball player's autograph was once worth $100. The autograph then dropped 50% in value. If it then increased by 20%, what is its value now?
A) $120 B) $70 C) $60 D) None of the above

(32) A membership to the gym costs $2/day if you prepay your dues for the year. If total of 125 people prepaid, how much did the gym make from these 125 people? Assume a year has 365 days.
A) $125,000 B) $91,250 C) $45,625 D) None of the above

(33) David rides his bike at 4 miles/hour. Mark leaves 15 mins after David. If Mark rides his bike at 5 miles/hour how long will it take for Mark to catch up to David?
A) 60 mins B) 30 mins C) 120 mins D) None of the above

(34) Teachers prepared 450 water balloons for the students at field day. Each water balloon was filled with 4 fl oz of water. How much water are in the 450 water balloons?
A) 225 cups B) 450 pints C) 56 quarts D) None of the above

(35) Yvonne flew 9 hours from New York to San Francisco. If her flight was at 8:00 am local time, what time did she make it to San Francisco local time?

A) 5:00 PM B) 2:00 AM C) 2:00 PM D) None of the above

(36) If a three-digit number is divided by 5 or by 6, the remainder is 1 in each case. What is the smallest such three-digit number?
A) 102 B) 114 C) 121 D) None of the above

(37) If 4 people can paint 2 fences in 5 hours, how many hours in all will it take 8 people to paint 8 fences?

A) 4 hours B) 10 hours C) 8 hours D) None of the above

(38) If $a + 9 = 14$, what is the value of $2a - 4$?
A) 6 B) 28 C) 10 D) None of the above

(39) In all, how many two-digit prime numbers have 4 as one of their digits
A) 1 B) 2 C) 3 D) None of the above

(40) Caleb has lots of different colored bricks. 6 green bricks, 3 yellow bricks, 7 red bricks and 4 blue bricks. How many different colored bricks does Caleb have in all?
A) 18 B) 20 C) 4 D) None of the above

4/5 Districts 2023 Mathematics Answer Key

1) A
2) C
3) A
4) B
5) A
6) D
7) A
8) C
9) C
10) D
11) C
12) A
13) C
14) B
15) D
16) A
17) B
18) B
19) A
20) D
21) C
22) B
23) B
24) D
25) B
26) A
27) C
28) C
29) C
30) C
31) C
32) B
33) A
34) A
35) C
36) C
37) B
38) A
39) C
40) C

INVITATIONAL 2022 - 2023

Mathematics

DO NOT OPEN TEST
UNTIL TOLD TO DO SO

(1) Evaluate: $6 \times (3 \text{ x } 2 + 1)$
A) 37 B) 42 C) 54 D) None of the above

(2) The quotient of twenty-four and twelve is equal to what amount?
A) 2 B) 288 C) 12 D) None of the above

(3) What is the ratio of ounces in two pints to one cup?
A) $\frac{1}{2}$ B) $\frac{16}{8}$ C) $\frac{4}{1}$ D) None of the above

(4) 2.5 square centimeters = _____square meters.
A) 0.025 B) 0.0025 C) 0.00025 D) None of the above

(5) What is the area of a circle with a diameter of 8 inches?
A) 64π in^2 B) 16 in^2 C) 16π in^2 D) None of the above

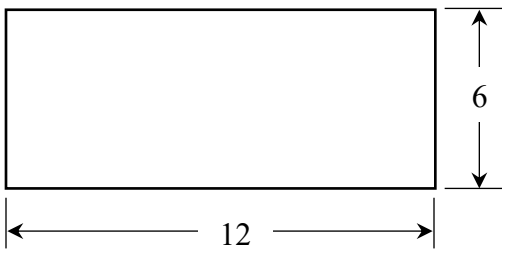
(6) How many minutes are between 12:30 AM and 12:30 PM of the same day?
A) 720 minutes B) 0 minutes C) 12 minutes D) None of the above

(7) If the sales tax for an item is $8\frac{1}{2}$%, what is the sales tax for an item that costs \$100?
A) \$82.50 B) \$8.25 C) \$0.83 D) None of the above

(8) How many whole numbers will evenly divide into thirty-six?
A) 8 B) 9 C) 36 D) None of the above

(9) 20 miles per minute (miles/minute) = _____ miles per hour (mph).
A) 20 mph B) 120 mph C) 60 mph D) None of the above

(10) What is the ratio of area to perimeter of the figure to the right?
A) $\frac{48}{96}$ D) None of the above
B) $\frac{72}{36}$
C) $\frac{36}{72}$



(11) First class postage currently costs 60¢. How many of these stamps can be purchased with \$6.50?
A) 5 B) 9 C) 11 D) None of the above

(12) The pumpkin patch has a bale of hay with a mass of 15 kilograms. How many grams of hay are in the the bale?
A) 15,000 g
B) 150,000 g
C) 1,500 g
D) None of the above

(13) This season, a volleyball team increases ticket prices by 10% over the previous season's prices. How much will a ticket cost this season that had a price of $20 the previous season?
A) $18.00 B) $21.00 C) $22.00 D) None of the above

(14) A photography class spends $10 for materials to make picture frames. The class sells the frames for $2 each. How much profit would the class make if the class made and sold 15 picture frames?
A) $30 B) $15 C) $20 D) None of the above

(15) The numbers for a pattern. 4, 9, 16, 25,... Which of the number below would NOT be part of the pattern?
A) 121 B) 169 C) 225 D) None of the above

(16) If $20 - 10a = 10$, what does ***a*** equal?
A) 10 B) 5 C) 1 D) None of the above

(17) If $\frac{1}{2} + \frac{1}{n} = 2$, then $n =$
A) $\frac{3}{2}$ B) $-\frac{1}{8}$ C) $\frac{2}{3}$ D) None of the above

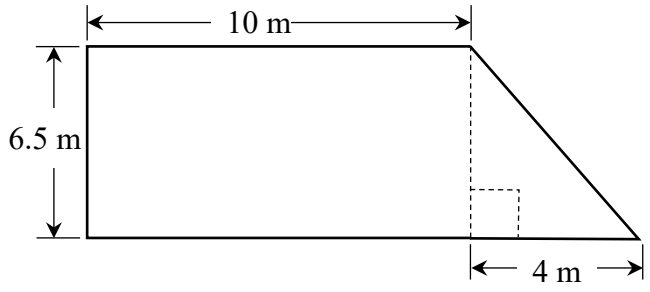
(18) If two numbers differ by 2 and their sum is 14, what is the larger number?
A) 8 B) 9 C) 6 D) None of the above

(19) A rectangle and a square have equal perimeters. The area of the square is 64 square inches and the length of the rectangle is 4 inches. What is the width of the rectangle?
A) 6-in. B) 8-in. C) 12-in. D) None of the above

(20) In a class of 40 students, 15 said they liked apple pie, 15 said they liked chocolate cake and 12 said they did not like either. How many students in the class liked both pie and cake?
A) 2 B) 15 C) 30 D) None of the above

(21) One mile = _____ feet.
A) 440 feet B) 5280 feet C) 1320 feet D) 1760 feet

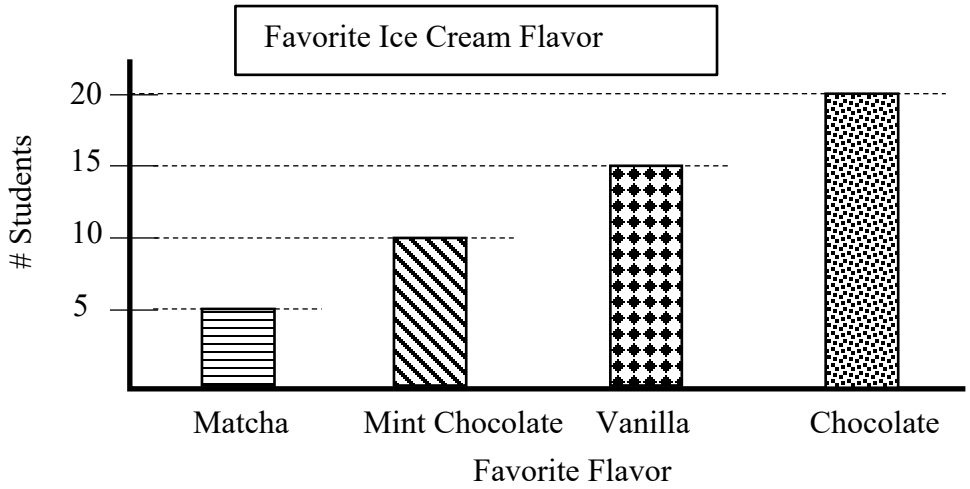
(22) What is the area of the figure to the right?
A) 66 m^2
B) 54 m^2
C) 78 m^2
D) None of the above



(23) Martha set a school record for most points in a single basketball game when her team scored 50 points. The six other players on her team averaged 3.5 points each. How many points did Martha score to set her school record?
A) 30 B) 21 C) 19 D) None of the above

(24) What is the sum of the two largest prime numbers less than 25?
A) 42 B) 38 C) 36 D) None of the above

For problems #25 – #28 please use the bar chart graph below.



(25) Students at Houston Middle School were surveyed recently as to their favorite ice cream flavor. According to the survey bar graph, how many total students were surveyed?
A) 100 B) 50 C) 70 D) None of the above

(26) Students at Houston Middle School were surveyed recently as to their favorite ice cream flavor. According to the survey bar graph, what percentage of the students preferred Vanilla?

A) 30% B) 25% C) 50% D) None of the above

(27) Students at Houston Middle School were surveyed recently as to their favorite ice cream flavor. If there are a total of 120 students enrolled at the surveyed school, how many students did not answer the survey?
A) 100 B) 50 C) 170 D) None of the above

(28) Students at Houston Middle School were surveyed recently as to their favorite ice cream flavor If you randomly picked one of the students that answered the survey, what is the probability that the student's favorite ice cream was matcha?
A) $\frac{1}{5}$ B) $\frac{1}{3}$ C) $\frac{2}{5}$ D) None of the above

(29) Michael is going to the store. Halfway to the store, he stops to talk with Elizabeth. He realizes he forgot his wallet and went back home. He then drove 10 km to the store. How far did he travel in total?
A) 10 km B) 20 km C) 30 km D) None of the above

(30) If $x = 5$ and $3x + 2 = y$, what is the value of y?
A) 15 B) 14 C) 12 D) None of the above

(31) A pro baseball player's autograph was once worth $200. The autograph then dropped 50% in value. If it then increased by 20%, what is its value now?
A) $110 B) $140 C) $120 D) None of the above

(32) A yearly membership to the museum costs $150. A total of 150 people paid for a yearly membership. What was the total of these yearly memberships?
A) 225 B) $22,500 C) $225,000 D) None of the above

(33) Kenny begins with 32 pennies in his money jar. Each time he reaches into the money jar, he removes half of the pennies that are in the jar. How many times must he reach in and remove coins from his jar so that exactly 1 coin remains in the jar?
A) 4 B) 5 C) 6 D) None of the above

(34) There are 45 buckets of water for the students at field day. Each bucket holds 36 cups of water. How many quarts of water are in the 45 buckets?
A) 810 qt. B) 1620 qt. C) 405 qt. D) None of the above

(35) Gloria and Flora both competed in the Houston Marathon starting at 8:00AM. Gloria finished the marathon in 5 hours and 20 minutes. Gloria finished the marathon 30 minutes after Flora did. At what time did Flora finish the marathon?
A) 1:50 AM B) 12:50 AM C) 1:50 PM D) 12:50 PM

(36) On Friday, 130 people each downloaded music from Napster. On Saturday, 110 student downloaded music from Napster. Every download cost $3. What was the total amount paid for the downloads on both days?
A) $730 B) 390 C) 330 D) None of the above

(37) A coffeemaker can brew 2 pints of coffee. How many ounces can this Keuring coffemaker brew?
A) 8 fl oz B) 16 fl oz C) 32 fl oz D) None of the above

(38) If $a + 7 = 21$, what is the value of $2a - 4$?
A) 24 B) 20 C) 37 D) None of the above

(39) What is the 8th prime number?
A) 13 B) 17 C) 19 D) None of the above

(40) Which of the following pairs of numbers has a greatest common factor of 10?
A) 2000 and 200 B) 40 and 50 C) 20 and 100 D) None of the above

UIL A+ ACADEMICS 4/5 Grade Invitational A

1.	B	21.	B
2.	A	22.	C
3.	C	23.	D
4.	C	24.	A
5.	C	25.	B
6.	A	26.	A
7.	B	27.	D
8.	B	28.	D
9.	B	29.	B
10.	B	30.	D
11.	D	31.	C
12.	A	32.	B
13.	C	33.	B
14.	C	34.	C
15.	D	35.	D
16.	C	36.	D
17.	C	37.	C
18.	A	38.	A
19.	C	39.	C
20.	A	40.	B