Version: 3.0

Question: 1

What will be the eighth element of the series beginning 1, -1/2, 2, -1/4, 4, -1/8?

A. ¼
B. 6
C. -1/16
D. 16
E. 8

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: C

Question: 2

John works for four hours at $15/hour. He then buys two CDs at $13.25 each. How much money does he have left?

A. $33.50
B. $1.75
C. $26.50
D. $15
E. $30

Answer: A

Question: 3

Solve

A. $4\frac{1}{12}$

B. $3\frac{5}{12}$

C. $3\frac{1}{12}$

D. 6

E. $4\frac{1}{4}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: B

Question: 4

A cell phone company offers two plans. Plan A customers pay $3 for every hour of phone usage. Plan B customers pay a flat fee of $35 per month. If Melanie signs up for plan B and uses her phone for 16 hours the first month, how much does she save compared to if she had selected plan A?

A. $8
B. $48
C. $35
D. $13
E. $17

Answer: D

Question: 5

Solve

A. 3×10^4

B. 3×10^{-4}

C. 3×10^{10}

D. 3×10^{-10}

E. 3×10^{21}

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: C

Question: 6

Which expression is equivalent to 4 × ?

A. $\frac{4}{3} \times 9^3$

B. $\frac{4}{3} \times 9^{1/3}$

C. $\frac{4}{3} \times 81$

D. $\frac{4}{3} \times 9^{1/2}$

E. $4 \times 9^{2/3}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: E

Question: 7

Yossi gets a 20% discount at the bicycle store because he works there. How much will he have to pay for gear that normally sells for $150?

A. $140
B. $130
C. $120
D. $110
E. $100

Answer: C

Question: 8

Martine gets an auto service bill charging her $350 for labor and $150 for parts. What percentage of the total bill is for parts?

A. 30%
B. 15%
C. 150%
D. 75%
E. 45%

Answer: A

Question: 9

Bartholomew buys 12 gallons of gasoline for his car at a price of $2.40 per gallon. He hands the attendant two $20 bills. How much change should he receive?

A. $16
B. $12.20
C. $11.40
D. $11.20
E. $10.80

Answer: D

Question: 10

If 25 pounds of potatoes costs $30, how much will 30 pounds cost?

A. $25
B. $32
C. $36
D. $38
E. $42

Answer: C

Question: 11

Half the students taking a math test receive an average grade of 66%. The other half receives an average grade of 86%. What is the average grade overall?

A. 70%
B. 74%
C. 76%
D. 78%
E. 82%

Answer: C

Question: 12

What is the value of A if

A. $\frac{4}{9}$

B. $\frac{3}{4}$

C. 3

D. $\frac{4}{3}$

E. $\frac{5}{3}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: D

Question: 13

A man drives 350 miles in 7 hours. If he continues at the same average speed, how long will it take him to complete a 400 mile trip?

A. 8 hours
B. 9 hours
C. 8.5 hours
D. 9.5 hours
E. 7.5 hours

Question: 14

Calculate the mean of the number set (26, 12, 26, 8, 26, 26, 23).

A. 26
B. 24
C. 23
D. 21
E. 20

Question: 15

A company selling televisions instituted a price increase at the end of the year. One unit's selling price of $720 was increased to $900. By what percentage was the price increased?

A. 20%
B. 15%
C. 25%
D. 18%
E. 22%

Question: 16

What is the average (arithmetic mean) of 8, 7, 7, 5, 3, 2, and 2?

A. $3\frac{4}{7}$

B. $4\frac{5}{6}$

C. $4\frac{6}{7}$

D. 5

E. $6\frac{4}{5}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

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Answer: C

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Question: 17

Ben is making wooden toys for the next arts and crafts sale. Each toy costs Ben $1.80 to make. If he sells the toys for $3.00 each, how many will he have to sell to make a profit of exactly $36.00?

A. 12
B. 20
C. 30
D. 60
E. 108

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Answer: C

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Question: 18

How many yards of material from a 24-yard length of cloth remain after 3 pieces, each 3 ½ yards long, and 5 pieces, each of 2 ¼ yards long are removed?

A. 2 ¼
B. 4 ¼
C. 4 5/12
D. 10 1/7
E. 10 5/6

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

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Answer: A

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Question: 19

Phillip charged $400 worth of goods on his credit card. On his first bill, he was not charged any interest, and he made a payment of $20. He then charged another $18 worth of goods. On his second bill a month later, he was charged 2% interest on his entire unpaid balance. How much interest was Phillip charged on his second bill?

A. $8.76
B. $7.96
C. $7.60
D. $7.24
E. $6.63

Answer: B

Question: 20

$$<, \leq, =, >, \geq, \neq$$

From

choose all the symbols that make the statement: 25 - 5 ___ 14 + 3 true.

A. $=, \geq, >$
B. $\leq, <, \neq$
C. $\neq, >, \geq$
D. $\geq, =$
E. $\neq, <$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: C

Question: 21

Evaluate and simplify: 51+3D

A. 25
B. 28

C. 13
D. 26
E. 10

Question: 22

=

A. $\dfrac{10-6}{4}$

B. $\dfrac{10+6}{4}$

C. $\dfrac{10}{4} - 6$

D. $\dfrac{10}{4} + 6$

E. $4(10 \div 6)$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Question: 23

Which of the following expressions represents the results of decreasing a number x by 7 and then multiplying that number by 3?

A. 3(7)-x
B. 3x-7
C. 7-3x
D. 3(7-x)
E. 3(x-7)

Question: 24

In the equation

A. 10
B. 1
C. 1.10
D. -15
E. +15

Answer: D

Question: 25

A student has earned scores of 87, 81, and 88 on the first 3 of 4 tests. If the student wants an average (arithmetic mean) of exactly 87, what score must she/he earn on the fourth test?

A. 85
B. 86
C. 87
D. 92
E. 93

Answer: D

Question: 26

Which of the following expressions represents the product of 3 less than twice x and 2 more than the quantity 3 times x?

A. -6x2+25x+6
B. 6x2+5x + 6
C. 6x25x+6
D. 6x2-5x-6
E. 6x2-13x-6

Answer: D

Question: 27

If x= -1 and y=2, what is the value of the expression 2x3 -3xy?

A. 8
B. 4
C. -1
D. -4
E. -8

Answer: B

Question: 28

For all r +2,

A. $\dfrac{y-3}{y+2}$

B. $\dfrac{y-2}{y+2}$

C. $\dfrac{y-2}{y+3}$

D. $\dfrac{y+3}{y-2}$

E. $\dfrac{y+3}{y+2}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: A

Question: 29

The x -coordinate of the solution of the system {x-3y=1 is?

A. $\dfrac{6}{5}$

B. $\dfrac{1}{3}$

C. 1

D. $\dfrac{1}{15}$

E. $\dfrac{5}{3}$

A. Option A
B. Option B
C. Option C
D. Option D
E. Option D

Answer: A

Question: 30

Solve: (4x2y) (-3x5y4)

A. -12x10y4
B. -12x7y5
C. x-3y-3
D. -12x7y4
E. x10y4
F. Option A
G. Option B
H. Option C
I. Option D
J. Option D

Answer: B

Question: 31

The solutions of x2 -2x 24= 24 are:

A. 6, -4
B. 8, -6
C. 2, 48

D. 20, 30
E. 0, 2

Question: 32

How long will Lucy have to wait before for her $2,500 invested at 6% earns $600 in simple interest?

A. 2 years
B. 3 years
C. 4 years
D. 5 years
E. 6 years

Question: 33

Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?

A. 4
B. 8
C. 12
D. 13
E. 16

Question: 34

If $r = 5z$ then $15z = 3y$, then $r =$

A. y
B. 2 y
C. 5 y
D. 10 y
E. 15 y

Question: 35

What is 35% of a number if 12 is 15% of a number?

A. 5
B. 12
C. 28
D. 33
E. 62

Question: 36

A computer is on sale for $1600, which is a 20% discount off the regular price. What is the regular price?

A. $1800
B. $1900
C. $2000
D. $2100
E. $2200

Question: 37

A car dealer sells a SUV for $39,000, which represents a 25% profit over the cost. What was the cost of the SUV to the dealer?

A. $29,250
B. $31,200
C. $32,500
D. $33,800
E. $33,999

Question: 38

After having to pay increased income taxes this year, Edmond has to sell his BMW. Edmond bought the car for $49,000, but he sold it for a 20% loss. What did Edmond sell the car for?

A. $24,200
B. $28,900
C. $35,600
D. $37,300
E. $39,200

Answer: E

Question: 39

If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?

A. 0.8 days
B. 1.09 days
C. 1.23 days
D. 1.65 days
E. 1.97 days

Answer: B

Question: 40

Find $0.12 \div 12$

A. 100
B. 10
C. 1
D. 0.01
E. 0.001

Answer: D

Question: 41

Divide x5 by x2

A. x25
B. x10
C. x7
D. x3
E. x2.5

Answer: D

Question: 42

Which of the following numbers could be described in the following way: an integer that is a natural, rational and whole number?

A. 0
B. 1
C. 2.33
D. -3
E. none of the above

Answer: B

Question: 43

Find the mode of the following list of numbers: 2, 4, 6, 4, 8, 2, 9, 4, 3, 8.

A. 2
B. 3
C. 4
D. 5
E. 6

Answer: C

Question: 44

In the fraction 3/x, x may not be substituted by which of the following sets?

A. {1, 2, 4}

B. {-2,-3,-4}
C. {1, 3, 7}
D. {0, 10, 20}
E. {1.8, 4.3}

Answer: D

Question: 45

Sarah needs to make a cake and some cookies. The cake requires 3/8 cup of sugar and the cookies require 3/5 cup of sugar. Sarah has 15/16 cups of sugar. Does she have enough sugar, or how much more does she need?

A. She has enough sugar.
B. She needs 1/8 of a cup of sugar.
C. She needs 3/80 of a cup of sugar.
D. She needs 4/19 of a cup of sugar.
E. She needs 1/9 of a cup of sugar.

Answer: C