Level 2: Expressions and Equations Midtest

Question 1:

What is the value of $(4 - 2)^2 + 3^3$?

a. 9

b. 13

c. 27

d. 31

Question 2:

Which expression shows another way to write 3^4?

a. 3 + 3 + 3 + 3

b. 4 + 4 + 4

c. 3 x 3 x 3 x 3

d. 4 x 4 x 4

Question 3:

What is the value of $\frac{4 + 3^2}{6 + 5^3}$

a. $\frac{10}{21}$

b. $\frac{13}{21}$

c. $\frac{10}{131}$

d. $\frac{13}{131}$

Continue ➡

Question 4:

Look at this expression.

$$6x^3 + 7x^2 + 4y$$

Which list shows all of the coefficients in the expression?

a. 2 and 3

b. x and y

c. 4, 6, and 7

d. 2, 3, 4, 6, and 7

Question 5:

A number is 6 more than the quotient of 15 and 3. What is the number?

Question 6:

If $y = 3$, what is the sum of y and 27?

Question 7:

A circular path has a radius, r, of 100 feet.

Which is the **best** approximation of the circumference of the circular path? (Use $C = 2\pi r$. *Use 3.14 for π.)*

a. 105 feet

b. 200 feet

c. 314 feet

d. 628 feet

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Question 8:

Look at this expression.

$3 + (7 - 4)^2 \times 8 \times 5$

Which step should be performed first to simplify this expression?

a. $3 + 7$

b. $7 - 4$

c. 4^2

d. 5×8

Question 9:

Which expression is equivalent to $3 + 5x + 4$?

a. $12x$

b. $7 + 5x$

c. $3 + 5 + 4$

d. $x\,(3 + 5 + 4)$

Question 10:

Which expression is equivalent to $8y$?

a. $8 + y$

b. $2y + 4y$

c. $8 + 8 + 8 + 8 + 8 + 8 + 8 + 8$

d. $y + y + y + y + y + y + y + y$

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Question 11:

A cable company charges a set-up fee and a monthly fee. This expression can be used to determine the total cost, in dollars, of having cable for m months.

$$30\,(3 + m)$$

Which expression can also be used to determine the total cost of having cable for m months?

a. $90 + 60m$

b. $90 + 2m$

c. $33 + 32m$

d. $33 + 2m$

Question 12:

Look at this inequity.

$$27 \geq 3x$$

Which numbers from the set {7, 8, 9, 10, 11} make the inequality true?

a. 7

b. 8

c. 9

d. 10

e. 11

Question 13:

a. Write an expression that represents the product of 4 times the sum of x and 8.

b. When $x = 3$, what is the value of the expression?

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Question 14:

A college campus has a lawn shaped like a circle with a radius of 60 meters.

Which is the **best** approximation of the area of the circular lawn? ($Area = \pi r^2$, where r is the radius. Use 3.14 for π).

a. 180 square meters

b. 360 square meters

c. 2,800 square meters

d. 11,300 square meters

Question 15:

Martie earns overtime pay at her job in a bakery. This expression can be used to determine the amount of overtime pay, in dollars, she earns in a week when she works h hours.

$$12\,(h - 40)$$

Which expression can also be used to determine the amount of overtime pay Martie earns?

a. $12h - 40$

b. $12h - 480$

c. $12 + h - 40$

d. $12 + h - 480$

Question 16:

A catering company charges $250 plus $25 per person to cater a party. This expression can be used to determine the cost to cater a party for n people.

$$250 + 25n$$

Which expression can also be used to determine the total cost to cater a party for n people?

a. $25\,(10 + n)$

b. $25\,(225 + n)$

c. $25\,(10 + 25n)$

d. $25\,(225 + 25n)$

Continue ➡

Question 17:

This question has two parts. Use the information below to answer Parts a and b.

On Monday, Sharon collected rocks at a beach for m hours. She collected 70 rocks. This equation represents the situation.

$$14m = 70$$

a. How many hours did Sharon spend collecting rocks on Monday?

[ ] hours

On Tuesday, Sharon collected the same number of rocks. Her speed increased by 6 rocks per hour.

b. Write an equation that can be used to find the number of hours, t , she spent collecting rocks on Tuesday.

Stop