Name KEY

RED

Evaluate the following expressions for x = 4

1) $x - 10$

Rewrite expression $(4)-10$

Answer -6

2) $3x$

Rewrite expression $3(4)$

Answer 12

3) $-x$

Rewrite expression $-(4)$

Answer -4

4) $5x + 4x$

Rewrite expression $5(4)+4(4)$

Answer 36

5) $\frac{32}{x}$

Rewrite expression $\frac{32}{(4)}$

Answer 8

6) $\frac{3}{x} + 0.25$

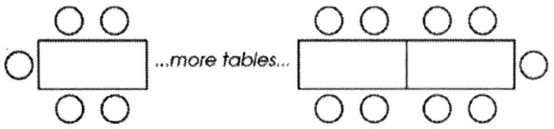
Rewrite expression $\frac{3}{(4)} + 0.25$

Answer 1

7) $x^2 - 9$

Rewrite expression $(4)^2 - 9$

Answer 7



Sal uses this formula to find the number of people (p) who can sit at any number of tables (t).

$$p = 4t + 2$$

8) If there are 12 tables, how many people can sit down?

$4(12)+2 = 50$ people

9) If there are 20 tables, how many people can sit down?

$4(20)+2 = 82$ people

10) It costs $5 to get into the fair and $2 per ride.

A. Write an expression to find the total spent if Sal rides r rides.

$5+2r$

B. How much would she spend if she went on 8 rides?

$5+2(8) = \$21$

11) The cost to ship a package is $2.79 plus an additional $0.38 per pound.

A. Write an expression to find the total spent.

$2.79+0.38p$

B. How much would it cost to ship an 8 pound package?

$2.79+0.38(8) =$

$\$5.83$

12) The 7th grade class is taking a field trip to the theater. The theater costs $15 per student ticket and $20 for each adult ticket.

A. Write the expression for the total spent on x students and y adults.

$15x+20y$

B. Evaluate the expression if we have 100 students and 10 adults.

$15(100)+20(10) =$

$\$1700$

Name KEY

YELLOW

Evaluate the following expressions for x = -3

1) $x - 10$

Rewrite expression $(-3)-10$

Answer -13

2) $3x$

Rewrite expression $3(-3)$

Answer -9

3) $-x$

Rewrite expression $-(-3)$

Answer 3

4) $5x + 4x$

Rewrite expression $5(-3)+4(-3)$

Answer -27

5) $\frac{30}{x}$

Rewrite expression $\frac{30}{(-3)}$

Answer -10

6) $\frac{3}{x} + .25$

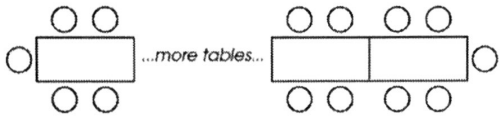
Rewrite expression $\frac{3}{(-3)} + 0.25$

Answer -0.75

7) $x^2 - 9$

Rewrite expression $(-3)^2 - 9$

Answer 0



Sal uses this formula to find the number of people (p) who can sit at any number of tables (t).

$p = 4t + 2$

8) If there are 12 tables, how many people can sit down?

$4(12)+2 = 50$ people

9) If there are 20 tables, how many people can sit down?

$4(20)+2 = 82$ people

10) Jill charges a base rate of $25 to mow a lawn plus $18 for each hour she mows the lawn.

A. Write an expression to show how much money she makes after h hours mowing x lawns.

$25x + 18h$

B. Evaluate the expression to find how much Jill makes after 10 hours (total) and 3 lawns.

$25(3)+18(10) =$

$\$255$

11) Mrs. Brown withdraws $180 each week to pay her babysitter.

A. Write an expression to represent the change in her bank account after w weeks.

$-180w$

B. What is the change in her bank account after one year?

$-180(52) = -\$9,360$

12) Jason has 50 gallons of water in his bathtub. The bathtub drains at 4 gallons per minute.

A. Write the expression Jason can use to find the total amount of water left in the bathtub after m minutes.

$50 - 4m$

B. Evaluate the expression if Jason has let the water drain for 180 seconds.

$50 - 4(3) = 38$ gallons

13) The 7th grade class is taking a field trip to the theater. The theater costs $15 per student ticket and $20 for each adult ticket.

A. Write the expression for the total spent on x students and y adults.

$15x + 20y$

B. Evaluate the expression if we have 100 students and 10 adults.

$15(100)+20(10) =$

$\$1,700$

Name KEY

GREEN

Evaluate the following expressions for x = -2 and y = 5

1) x – y

Rewrite expression (-2)-(5)

Answer -7

2) 3x + 2y

Rewrite expression 3(-2)+2(5)

Answer 4

3) -x – 3y

Rewrite expression -(-2)-3(5)

Answer -13

4) 5x + 4y + 10

Rewrite expression 5(-2)+4(5)+10

Answer 20

5) 32/x + 15/y

Rewrite expression $\frac{32}{(-2)} + \frac{15}{(5)}$

Answer -13

6) $\frac{3}{x} + \frac{y}{4}$

Rewrite expression $\frac{3}{(-2)} + \frac{(5)}{4}$

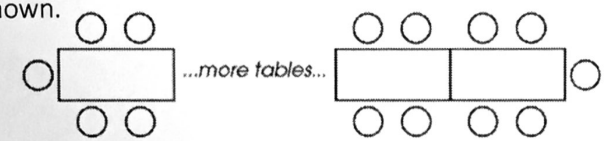
Answer $-\frac{1}{4}$

7) $x^2 + y$

Rewrite expression $(-2)^2+5$

Answer 9

8) Sal is having a party and having people sit at a long line of tables. Each table can sit 4 people, plus one person cat sit at each end of the line of tables, as shown.



A. Write an expression to determine how many people can sit at x number of tables.

B. If there are 12 tables, how many people can sit down?

4(12)+2 = 50 people

C. If there are 20 tables, how many people can sit down?

4(20)+2 = 82 people

D. If 70 people attend the party, how many tables will he need?

70 = 4x+2 17 tables

9) Meg and Tom were both running for Student Council President. Meg received 50 more than twice the amount that Tom received.

A. If Tom received v votes, write the expression for the amount Meg received.

2v+50

B. Evaluate the expression if Tom received 30 votes.

2(30)+50 = 110 votes

10) Sara is jogging around her neighborhood. She is running at a rate of .1 miles per minute.

A. Write an expression to represent her total distance after m minutes.

0.1m

B. How long will it take her to run 3 miles?

3 = 0.1m 30 min.

11) The formula used for converting the temperature from Fahrenheit (*F*) to Celsius (*C*) is °C = $\frac{5}{9}$(°F – 32).

Convert the following temperatures by evaluating the formula for F:

95°F = 35 °C

77°F = 25 °C

50°F = 10 °C

59°F = 15 °C

23°F = -5 °C

12) **The value of *x* is even, and the value of *y* is odd. Which expression will produce an even number?**

(A.) $x + 2y$

B. $2x + y$

C. $x^2 + y^2$

D. $(x + y)^2$

13) Which value for *x* makes the inequality $-4x - 5 > 11$ true?

(A.) $x = -6$ ***Hint: plug each x value in.**

B. $x = -4$

C. $x = 4$

D. $x = 6$