

UNIT 2 REVIEW: Algebraic Expressions and Equations (MATH 7 PLUS)

1) The product of x and 2 is equal to 5 fewer than x .
Find x .

2) Write the algebraic expression for the following:
5 more than triple the number of people, p

3) AJ is 13 years old. Write an expression that will
tell what his age is y years from now.

Simplify.

4) $20 - 4 \cdot 2$

5) $12 - 6 \cdot 5 \div 2 + 6$

6) $3[(6 - 7) + 2(-4 - 2)]$

7) $12 - 4(-8v + 17) - 36v$

8) $7d + 12 - 4d - 3$

9) $9 + 5(-7x^2 + 5) + 10x^2$

10) $15x + 2x^2 - 12x - 13x^2 - 15$

11) Insert parentheses to make the equation true.

$$3 \cdot 2 + 4 - 1 \cdot 5 = 13$$

Evaluate.

12) $4r^2 - 5t$ for $r = -5$ and $t = 3$

13) $-3(2a + 3b + 4)$ for $a = 4$ and $b = 2$

Solve and check.

14) $x + 25 - 43 = -38$

15) $4a + 12 = -16$

16) $6q - 7q = 45$

17) $7x - 9 = -x + 39$

18) $-3(x + 2) = 4(x - 5)$

19) Your job cutting grass pays \$10 per hour. **Write a variable expression** for your pay in dollars for working h hours. What is your pay if you work 15 hours?

20) **Write an equation, solve, and answer the question in the problem.**

To clean an office a cleaning service charges a fee of \$35, plus \$20 per hour spent cleaning. If your bill is \$135, how many hours did the service spend cleaning your office?

Equation _____

Answer _____

21) **Write an equation, solve, and answer the question in the problem.**

The NC State Fair sold \$1500 worth of tickets in advanced sales. They then sold 1050 more tickets at the gate. If they collected a total of \$9900, how much did the each of the gate tickets cost?

Equation _____

Answer _____

22) **Write an equation and solve, and answer the question in the problem.**

A'Nijuel earns \$7 an hour working at the Pet Care Center. He earns \$10 an hour for time worked over 40 hours in one week. He worked 40 hours plus some overtime hours last week and made \$330 dollars. How many overtime hours did he work?

Equation _____

Answer _____

23) **Write an equation and solve, and answer the question in the problem.**

Amelia Anne wants to buy a video game system for \$330. She has \$50 and is saving \$40 each week. How many weeks will it take her to save enough to buy the system?

Equation _____

Answer _____

- 24) **Write an equation, solve, and answer the question in the problem.**

The perimeter of a rectangular frame is 38 inches. The width of the frame is 3 more than the length. What are the measurements for the width and length of the frame?

Equation _____

Answer _____

- 25) **Write an equation, solve, and answer the question in the problem.**

Mathis has 7 more than 4 times as many baseball cards as Tyler. Together they have 607 cards. How many baseball cards does Tyler have?

Equation _____

Answer _____

- 26) **Write an equation, solve, and answer the question in the problem.**

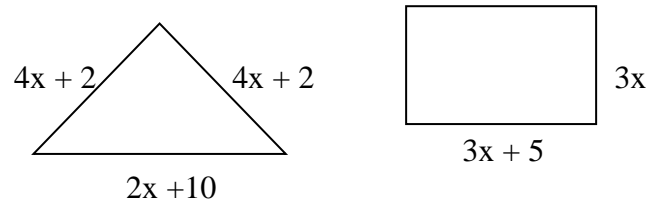
Alivia has 42 apps on her phone, and she buys 3 new apps each week. Mia has 24 apps on her phone, and she buys 6 new apps a week. After how many weeks will Alivia and Mia have the same number of apps?

Equation _____

Answer _____

- 27) If a number n is added to 36, the result is three less than four times n . What is the value of n ?

- 28) The figures below have the same perimeter. (Drawings are not to scale.)



- Find the lengths of the sides in the triangle and rectangle.

Triangle sides: _____, _____, _____

Rectangle sides: _____, _____, _____, _____

- Find the perimeter of each figure.

Triangle perimeter: _____

Rectangle perimeter: _____

- 29) Find 3 consecutive even integers whose sum is -36.