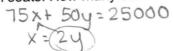
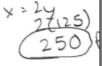
- 14. Determine the value of y for the system of equations (x 3y = 4) and (2x + y = 8)
- 15. An auditorium earned \$25,000 in sold-out concert ticket sales. Front section tickets cost \$75 pt seat and back section tickets cost \$50 per seat. The number of front section seats is twice the nu of back section seats. How many seats are in the front section?

X=front Y=back

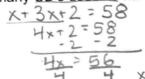


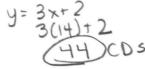
75(2y) + 50y = 25000 150y + 50y = 25000 200y = 25000 200 + 25000



16. Sam has a total of 58 DVD's and CD's. If the number of CD's is two more than three times the number of DVD's, how many CD's does he have?

x + y = 58y = 3x + 2





17. The length of each side of a square wooden box, in inches, is represented by the expression 8m². The volume of the box, in cubic inches, is (8m²)³. Simplify this expression.

83mb or 512mb

18. Easton simplified the following expression:  $(x^2y^6z^5)(x^4y^5z^3) = x^6y^1z^8$ 

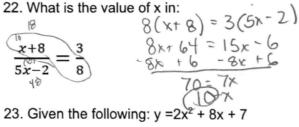
If he writes his answer in the form of  $x^ay^bz^c$ , what is the value of  $\underline{b}$ , the exponent on y?

19. A concert hall is in the shape of a rectangle. Its floor has a length of (x + 6) meters and a width of (2x - 3) meters. The expression below represents the area of the floor of the hall in square meters.

(x + 6)(2x - 3). Simplify this expression.

21. Simplify: 
$$48xy^2 + 24xy^4 - 12x^2y^4$$
.  
 $12xy^2 (4 + 2y^2 - xy^2)$ 

22. What is the value of x in:



- a. What is the axis of symmetry?  $\chi = \frac{-10}{20} = \frac{-8}{2(2)} = \frac{-8}{4} = -2$ 
  - b. What is the vertex? (-2, -1)
  - c. What is the y-intercept? ( O, \(\bar{1}\))

25. One solution of the equation  $3x^2 - 16x + 5 = 0$  is 1/3. What is the other solution?

$$(3x-1)(x-5)$$
  
 $x=\frac{1}{3}$   $x=\frac{1}{5}$ 

26. What are the solutions to:  $6x^2 = 18x$ ?

27. The height in meters of a projectile can be modeled h = -4.9t2 + vt + s where t is the time seconds) the object has been in the air, v is the initial velocity (in meters per seconds) and s height (in meters). A soccer ball is kicked upward from the ground and flies through the air nitial vertical velocity of 4.9 meters per second. Approximately, after how many seconds do