4 🖩 **4**

DIRECTIONS

For questions 31-38, solve the problem and enter your answer in the grid as described below, on the answer sheet.

1. Although not required, it is suggested that you write your answer in the boxes at the top of the columns to help you fill in the circles accurately. You will receive credit only if the circles are filled in correctly.

2. Mark no more than one circle in any column.

3. No question has a negative answer.

4. Some problems may have more than one correct answer. In such cases, grid only one answer.

5. **Mixed numbers** such as $3\frac{1}{2}$ must be gridded as 3.5 or $7/2$. (If $3\ 1\ /\ 2$ is entered into the grid, it will be interpreted as $\frac{31}{2}$ not $3\frac{1}{2}$.)

6. **Decimal answers:** If you obtain a decimal answer with more digits than the grid can accommodate, it may be either rounded or truncated, but it must fill the entire grid.

Answer: $\frac{5}{12}$

Write answer in boxes.

Grid in result.

Answer: 3.25

← Fraction line

← Decimal point

Acceptable ways to grid $\frac{2}{3}$ are:

Answer: 212 - either position is correct.

NOTE: You may start your answers in any column, space permitting. Columns you use should be left blank.

31

What is the value of r if the line that passes through $(-5, 4)$ and $(3, r)$ has a slope of $-\dfrac{1}{5}$?

33

$$ax - 9y = 7$$
$$bx - 4y = 5$$

In the system of equations above, a and b are constants and x and y are variables. If the system of equations above has no solution, what is the value of $\dfrac{a}{b}$?

32

At a farmers market, n pounds of avocados cost $4.50. If Gloria paid $4n$ dollars for 8 pounds of avocados, what is the value of n ?

34

In a book store, hardcover copies of a certain book are priced at $24 each and paperback copies of the same book are priced at $13.50 each. Last week, the total amount collected in the sales of the hardcover and paperback copies was the same as if every book sold had cost $15.60 each. If 300 hard cover copies were sold, what was the total number of the books sold last week?

35

If $(ax-1)(bx+2) = cx^2 - x - 2$ for all values of x, and $a + b = 10$, what is the value of c?

37

$$x^2(x+2) = x^2 + 8x + 12$$

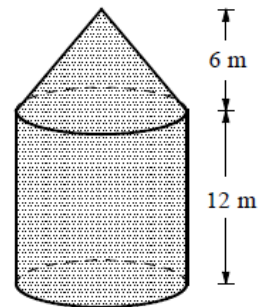If $x > 0$, what is the solution to the equation above?

36

The purchase price of a car is $24,000, and the value of the car decreases by 15 percent per year. The value V, in dollars, t years after the car is purchased is given by the function $V = 24,000(x)^t$. What is the value, in dollars, of the car 10 years after it is purchased? (Round your answer to the nearest dollar and ignore the dollar sign when gridding your answer.)

38

A grain silo of a barn consists of a right circular cylinder capped by a right circular cone. The heights of the cylinder and cone are represented by the figure above. If the volume of the grain silo is 224π cubic meters, what is the diameter of the silo, in meters?

Answers

SAT Practice Test 2 – Calculator

31. $\dfrac{12}{5}$ or 2.4   32. 3   33. $\dfrac{9}{4}$ or 2.25   34. 1500

35. 21   36. 4725   37. 3   38. 8