

Cumulative Test

10A

1. (50) Graph the inequality $x > -2.5$.

2. (33) A bag contains 3 red marbles and 3 blue marbles. Find the probability of drawing a red marble, keeping it, and drawing another red marble. Write the probability as a fraction in simplest form.

3. (48) Find the mean, median, and mode of the values in the data set below, rounded to the nearest whole.

42, 44, 38, 44, 57, 39, 44, 39, 41

4. (2) Identify the factors and coefficients in the expression $\frac{y}{2}$.

Simplify problems 5–7.

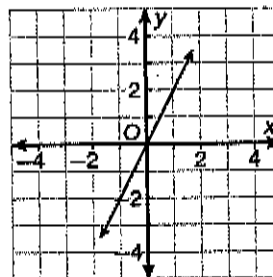
5. (46) $\sqrt{\frac{36}{49}}$

6. (39) $\frac{xy}{a} \left(\frac{xyz}{b} + 3ax - b^2 \right)$

7. (40) $(8x^3y^5)^2$

8. (38) Factor $3a^2b^5 - 3a^4b^3$ completely.

9. (41) Find the slope of the line below.



10. (44) Determine the slope of the line that contains the points (1, 5) and (9, 3).

11. (49) The equation $y = -2x + 1$ is in slope-intercept form. Graph $y = -2x + 1$ on a coordinate grid.
12. (47) A bookstore marks up the price of paperbacks they purchase at \$6.00 each by 60%. What is the markup and new price of each paperback?
13. (43) Determine the value for which the expression $\frac{(a+2)(a-3)}{5a+15}$ is undefined.
14. (37) Write 0.0056 in scientific notation.
15. (34) Write the first 4 terms of an arithmetic sequence where $a_1 = -4$ and the common difference $d = 5$.
16. (28) Car rental company A charges \$12.00 per day plus \$0.25 per mile. Car rental company B charges \$21.00 plus \$0.10 per mile. For what number of miles is the cost per day the same?
17. (31) The ratio of men to women in an exercise class is 4 : 5. In all, the class has 27 students. How many men and how many women are in the class?
18. (Inv. 3) Owners of a furniture store want to know what people think of their store. They survey every tenth person who enters and buys something at the store. What is a possible bias for this survey?
19. (45) Write the inequality $20 > 6 + x$ in words.
20. (Inv. 5) Identify Statement 2 as the *converse*, *inverse*, *contrapositive*, or *contradiction* of Statement 1. Then indicate the truth value of each statement.
- Statement 1: If a figure is a square, then it has four sides.
- Statement 2: If a figure is a square, then it does not have four sides.