

SAMPLE QUESTIONS -- TEST III

1. $4x^4y^2 - x^2y^4 =$

- (A) $x^2y^2(2x - y)(2x - y)$ (B) $x^2y^2(2x + y)(2x - y)$ (C) $4xy(x^3 - y^3)$
 (D) $4x^2y^2(2x - y)(2x - y)$

$$\begin{cases} 5x + 3y = 21 \\ x + y = 5 \end{cases}$$

2. In the solution of the system of equations above, what is the value of x ?

- (A) -2 (B) 1 (C) 3 (D) 4

3. The y -intercept of the graph of $5x - 3y = 7$ is

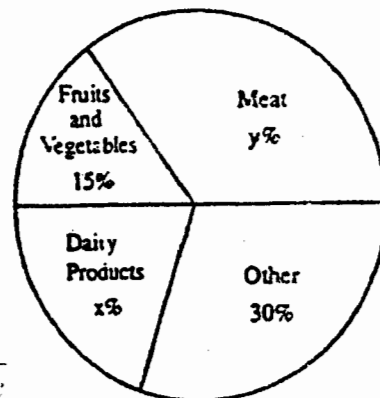
- (A) $-\frac{7}{3}$ (B) $\frac{7}{5}$ (C) $\frac{5}{3}$ (D) 7

4. A bag contains exactly 3 yellow disks and 11 green disks. If a disk is chosen at random, what is the probability that it is yellow?

- (A) $\frac{1}{11}$ (B) $\frac{3}{14}$ (C) $\frac{3}{11}$ (D) $\frac{1}{3}$

5. According to the graph to the right, if Carl's weekly grocery expenses are \$100, how much does he spend on meat and dairy products?

CARL'S WEEKLY GROCERY EXPENSES



- (A) \$55 (B) \$45 (C) \$35 (D) \$20

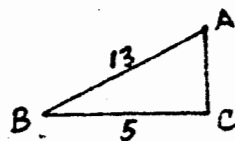
6. $\frac{c-d}{\frac{1}{d} - \frac{1}{c}} =$

- (A) $\frac{c-d}{dc}$ (B) $\frac{dc}{c-d}$ (C) dc (D) $-dc$ (E) $\frac{1}{dc}$

7. Which of the following is an equation of the line with slope 3 and y -intercept -4?

- (A) $y = \frac{x}{3} - 4$ (B) $y = 3x - 4$ (C) $y = 3x + 4$ (D) $y = 4x - 3$
 (E) $y = 4x + 3$

8. In the right triangle shown, what is the length of AC ?



- (A) 8 (B) 12 (C) 18 (D) $\sqrt{18}$ (E) $\sqrt{194}$