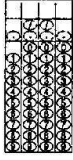


Passport to Advanced Math Drill 5

This section contains two types of questions. For multiple-choice questions, solve each problem and circle the letter of the answer that you think is the best of the choices given. For Student-Response questions, denoted by the grid-in icon, write your answer in the blank space provided.



1. If $x - y = 3$, then $x^2 - 2xy + y^2 =$

3. If $x^2 - y^2 = 18$, and $x + y = 3$, then $y - x =$

- A) -6
- B) -3
- C) 3
- D) 6

2. $(2x - 3)(x + 4) =$

- A) $2x^2 + 5x - 12$
- B) $2x^2 + x - 12$
- C) $2x^2 + 11x + 12$
- D) $3x + 1$

4. If $x + y = 7$ and $x^2 + y^2 = 42$, then $xy =$

- A) 49
- B) 7
- C) 3.5
- D) -7

5. Where defined, $\frac{36x^7 + 36x^4}{48x^6 + 24x^4} =$

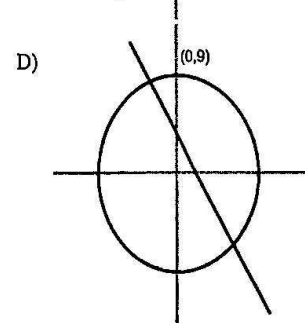
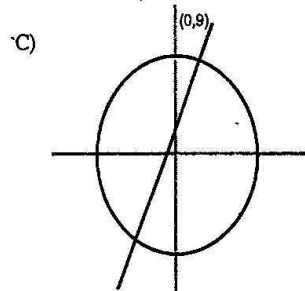
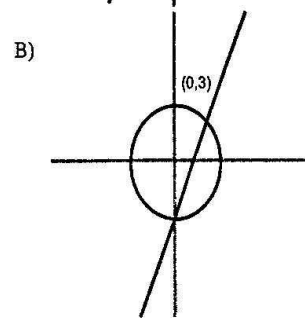
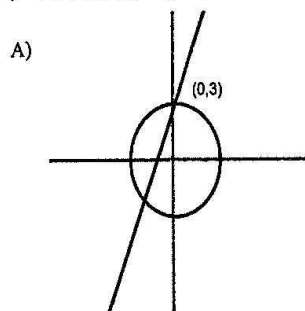
A) $\frac{3x+9}{10}$

B) $\frac{36x^{11}}{24(2+x^{10})}$

C) $\frac{3(x^3+1)}{2(2x^2+1)}$

D) $\frac{3(x^7+x^4)}{2(2x^3+x^2)^2}$

6. Which of the following graphs could be used to solve the system of equations $y = 2x + 3$ and $x^2 + y^2 = 9$?



7. Where defined, $\frac{x^4 - 7x^3 + 21x^2 - 30x + 18}{x^2 - 4x + 6} =$

- A) $x^2 - 3x + 3$
- B) $x^2 - 11x + 17$
- C) $x^4 - 7x^3 + 31.5$
- D) $x^2 - 3x - 3$

8. When $x \neq -2$, $\frac{x^4 - 2x^3 - 8x^2 + 2x + 4}{x + 2} =$

- A) $x^3 - 4x^2 + 2$
- B) $x^3 - 8x + 5$
- C) $x^3 - 2x^2 - 8x + 1$
- D) $x^3 - 4x + 2$

9. If $x^2 - y^2 = 13$ and $x - y = 12$, then $x =$

- A) $\frac{157}{24}$
- B) $\frac{131}{12}$
- C) $\frac{157}{12}$
- D) $\frac{13}{12}$