



9. FONCTIONS RATIONNELLES ET FONCTIONS IRRATIONNELLES

Étudier les fonctions f , ainsi définies, et construire leur courbe représentative.

1. $f(x) = \frac{x^2}{x+2}$

2. $f(x) = x - 1 + \frac{9}{x+1}$

3. $f(x) = \frac{4x^2 + 4x + 5}{4x + 2}$

4. $f(x) = \frac{x^2 + 2x + 2}{x - 1}$

5. $f(x) = \frac{-x^2 - 2x - 1}{x + 3}$

6. $f(x) = \frac{x^2}{|x| + 2}$

7. $f(x) = x + 2 - \frac{1}{x+1}$

8. $f(x) = x + 3 - \frac{1}{2x+1}$

9. $f(x) = -2x + 1 + \frac{2}{x-1}$

10. $f(x) = |x+1| + \frac{1}{x-1}$

11. $f(x) = \frac{(x-2)^2}{x^2+2}$

12. $f(x) = \frac{x^2 - 4x + 6}{(x-2)^2}$

13. $f(x) = \frac{2x^2 - 3}{x^2 - 1}$

14. $f(x) = 2 - \frac{1}{x+1} + \frac{4}{x+2}$

15. $f(x) = \frac{x^2 - 1}{2x^2 - x}$

16. $f(x) = \frac{-3x^2 - 12x}{x^2 - 2x + 1}$

17. $f(x) = \left| \frac{8x}{x^2 + 1} \right|$

18. $f(x) = \frac{2x+1}{x^2+x}$

19. $f(x) = x^3 + x^2 + 2x - 4$

20. $f(x) = -x^3 + 2x^2 - 2x + 1$

21. $f(x) = x^3 - 3x + 2$

22. $f(x) = \frac{x^3}{3} - \frac{5}{2}x^2 + 6x$

23. $f(x) = \frac{1}{3}(x-2)^3$

24. $f(x) = |x^3 - 6x^2 + 11x - 6|$

25. $f(x) = x^4 - 16$

26. $f(x) = x^4 - 5x^2 + 4$

27. $f(x) = 2x^4 + 3$

28. $f(x) = -(x-1)^2$

29. $f(x) = x^4 - 8x^3 + 22x^2 - 24x$

30. $f(x) = \frac{2x^2 + x - 1}{x^2 - x + 1}$

31. $f(x) = \frac{x^2 + 3x - 4}{x^2 - x - 2}$

32. $f(x) = \frac{-3x^2 + 10x - 8}{2(x^2 - 4x + 3)}$

33. $f(x) = \frac{x(3x-4)}{2(x-1)^2}$

34. $f(x) = |2-x| - |10-x-2x^2|$

$$35. f(x) = \frac{-2x(x-3)}{3(x-1)}$$

$$36. f(x) = \frac{x^2}{2} + \frac{1}{x}$$

$$37. f(x) = 5x + 3\sqrt{x^2 - 1}$$

$$38. f(x) = \frac{x^2 + 8x + 12}{\sqrt{x^2 + 4x + 3}}$$

$$39. f(x) = x^3 + \frac{1}{x}$$

$$40. f(x) = x + \frac{1}{\sqrt{1-x}}$$

$$41. f(x) = x - \frac{1}{\sqrt{1-x}}$$

$$42. f(x) = \sqrt[3]{x^3 - 3x + 2}$$

$$43. f(x) = (x-2)^2(x+3)(x-4)$$

$$44. f(x) = \frac{(x+1)^3}{(x-1)^2}$$

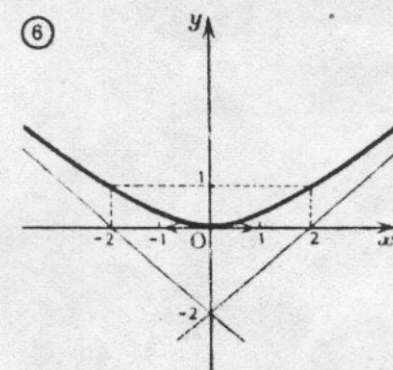
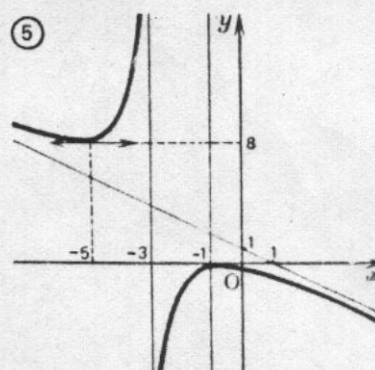
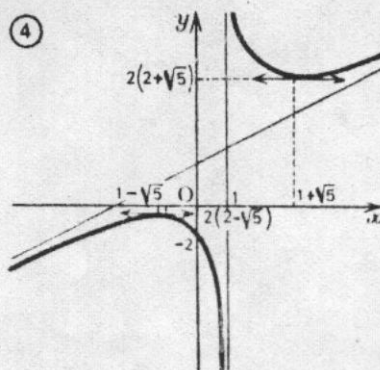
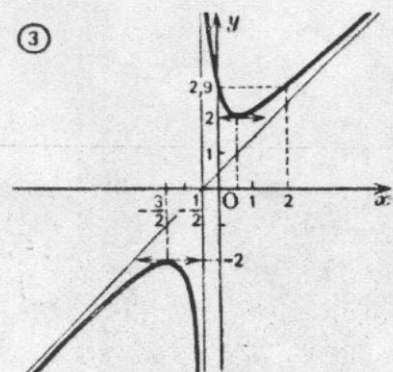
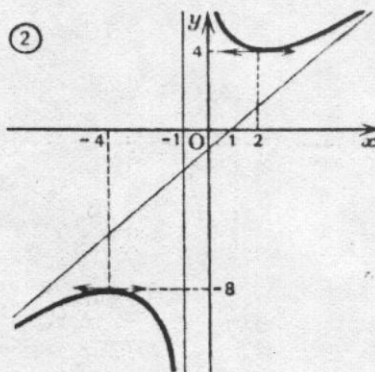
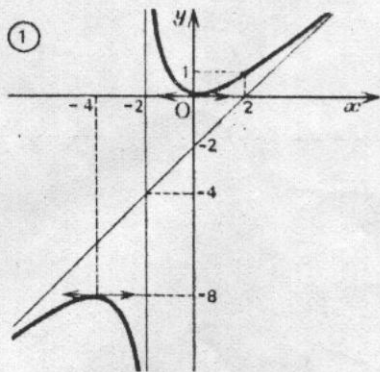
$$45. f(x) = \frac{x-1}{(2x-1)^2}$$

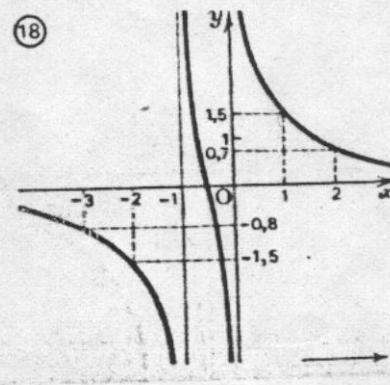
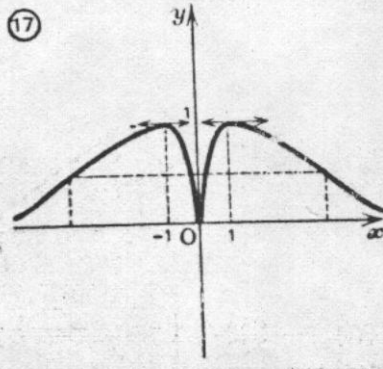
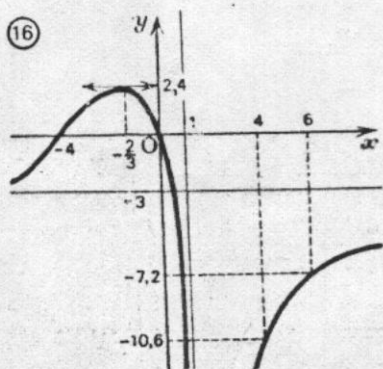
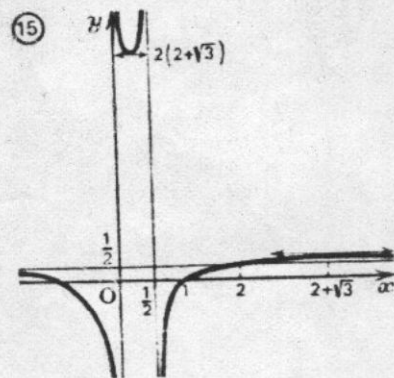
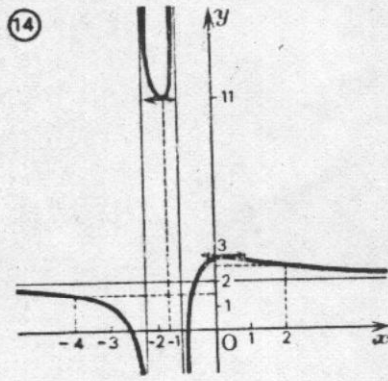
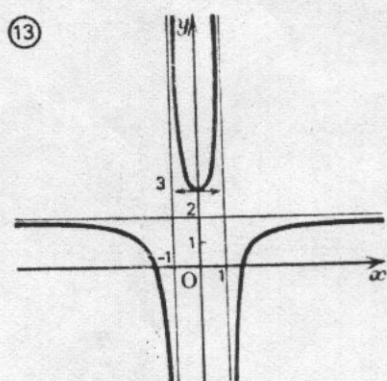
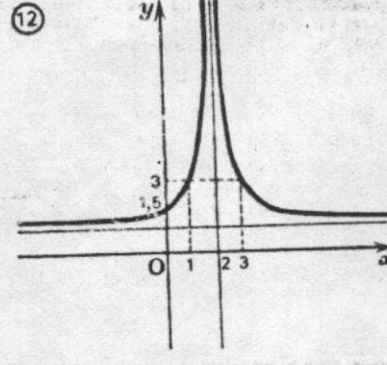
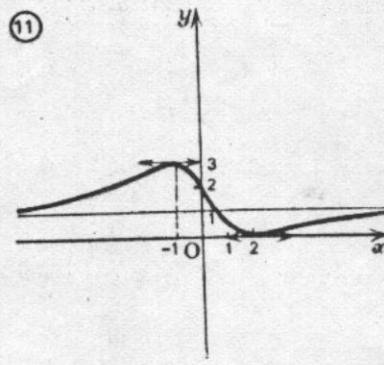
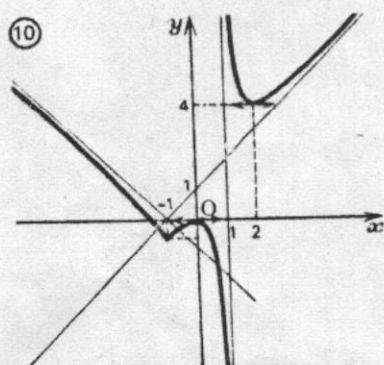
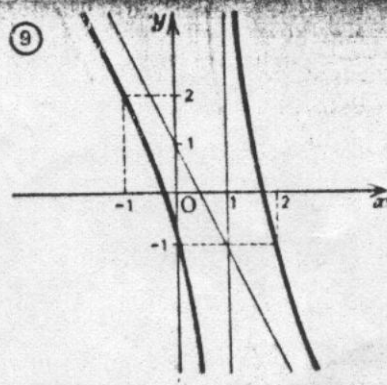
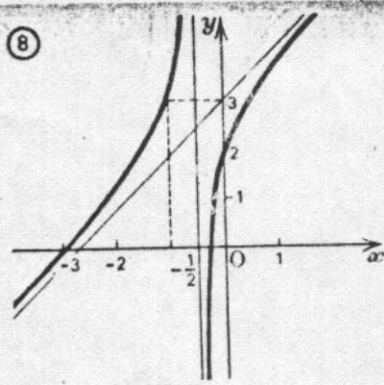
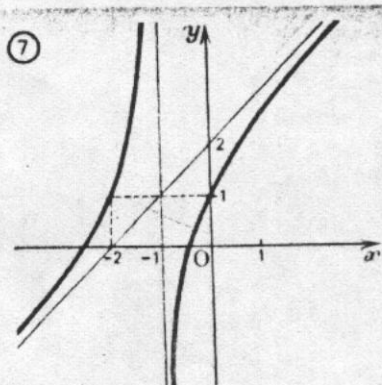
$$46. f(x) = \frac{x^3 - 1}{x^2}$$

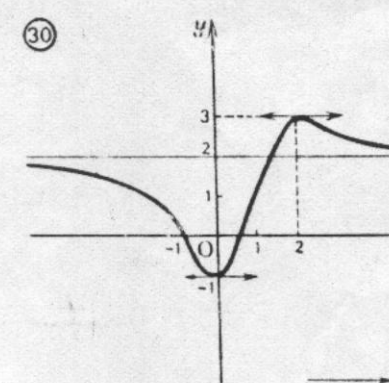
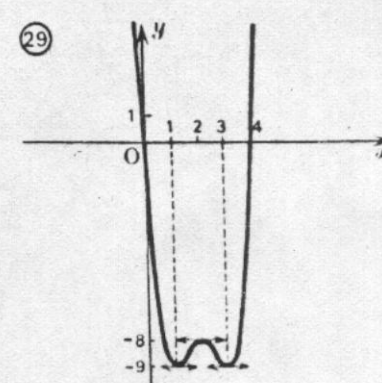
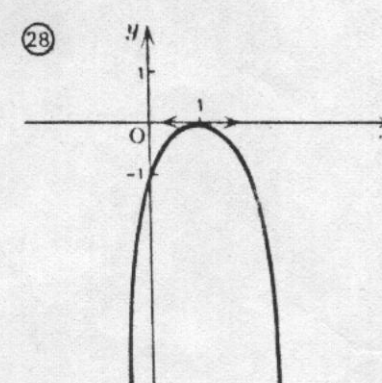
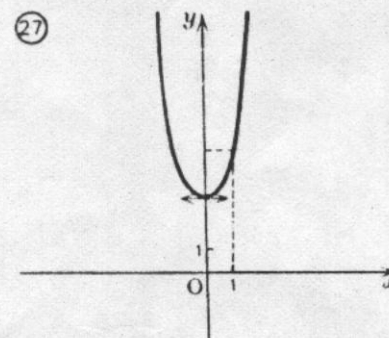
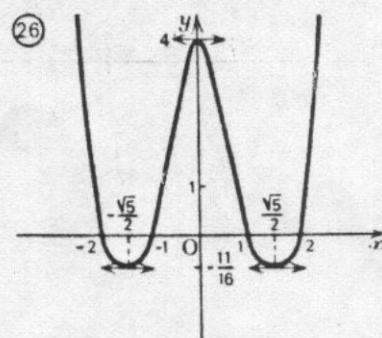
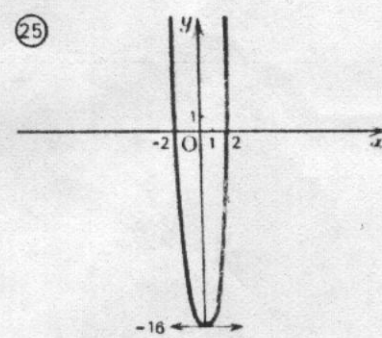
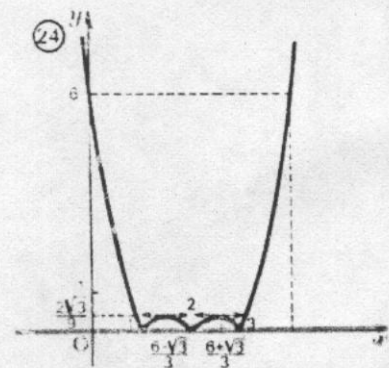
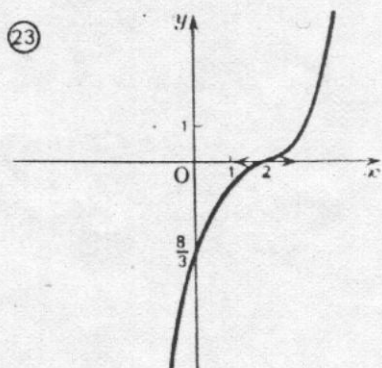
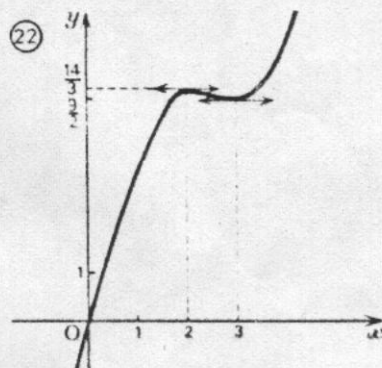
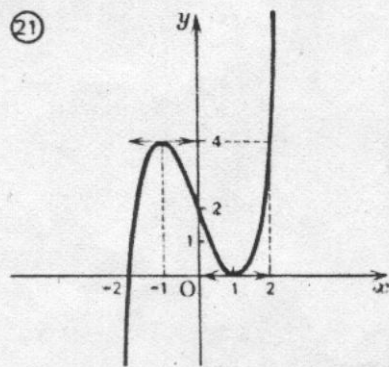
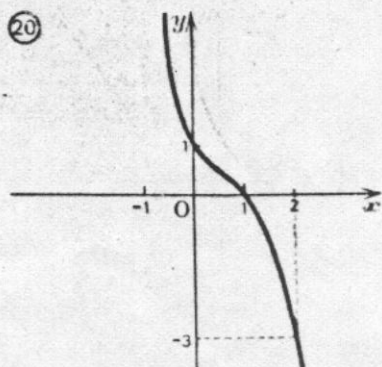
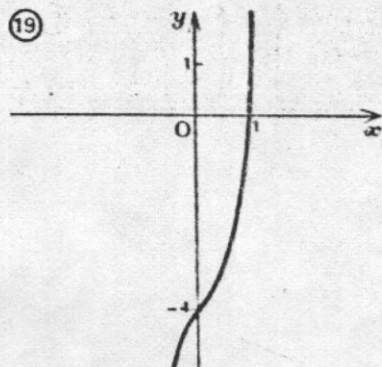
$$47. f(x) = x + \sqrt{3x(8-x)}$$

$$48. f(x) = (x+1)^2(2-x)^3$$

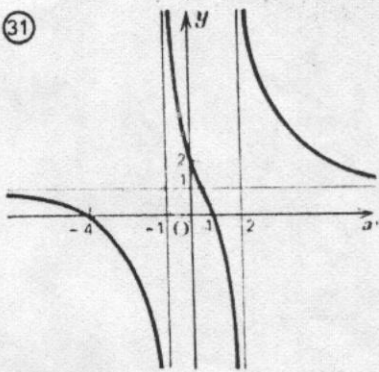
RÉPONSES



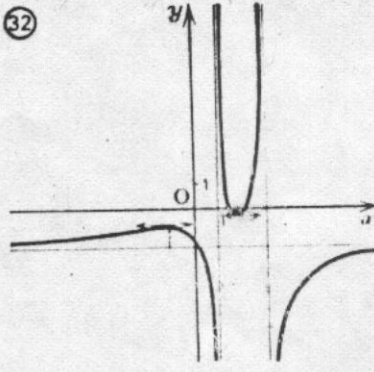




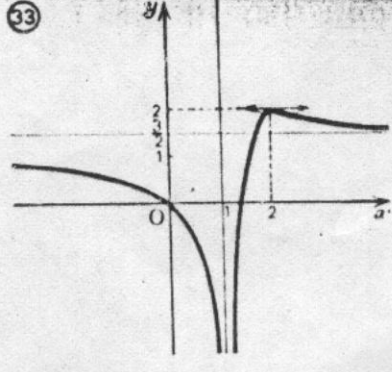
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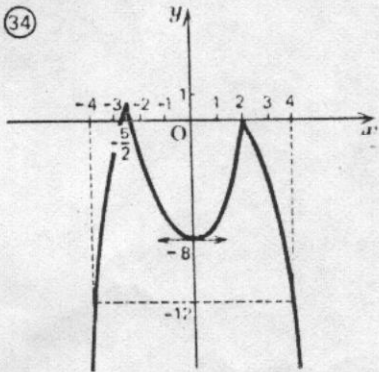
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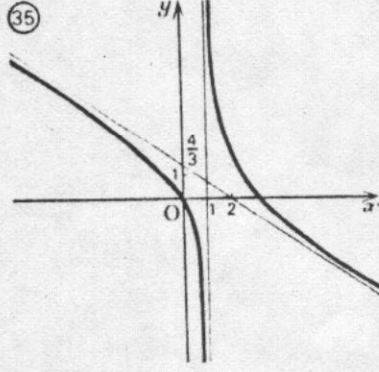
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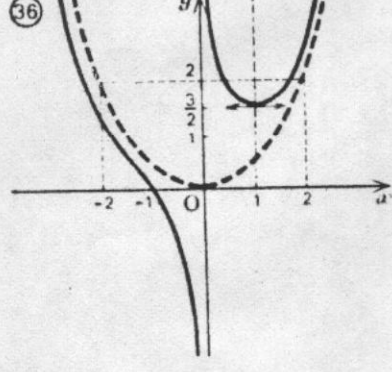
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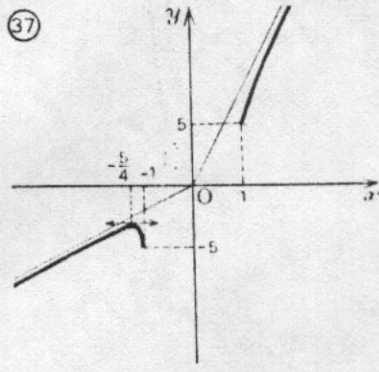
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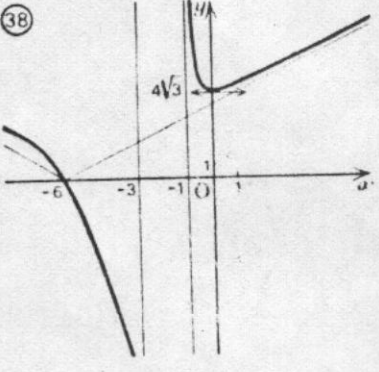
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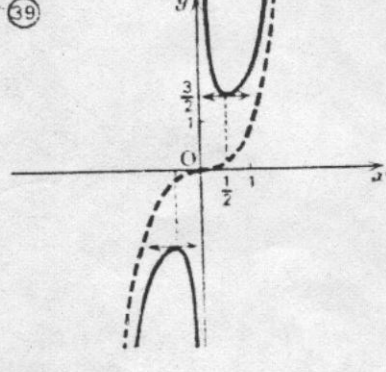
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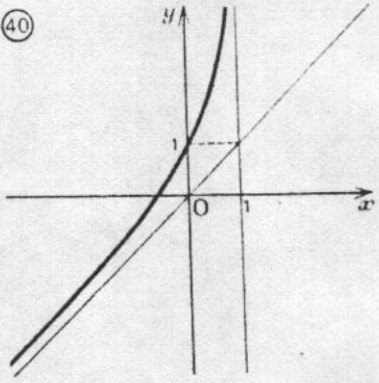
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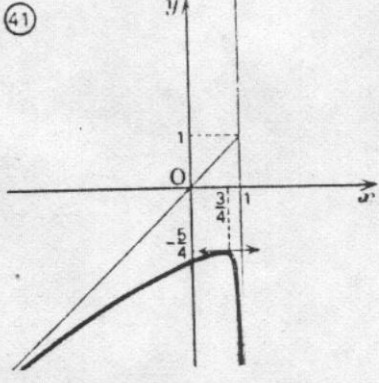
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