14.6 Advanced graphs (ADVANCED)

Match each of the equations below with its correct graph. Graph **A** is $y = f(x)$.
For questions 12 to 15, write the coordinates of the points of intersection and check by substitution.

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6 $y = (x + 3)^3$

7 $(x - 2)^2 + (y + 1)^2 = 4$

8 $(x + 1)^2 + (y - 2)^2 = 16$

9 $y = x(x - 1)(x + 2)$

10 $y = (x + 1)(x - 2)(x - 1)$
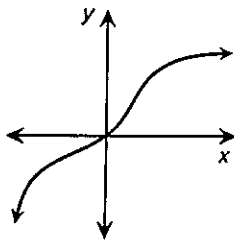
11 $y = (x^2 - 1)(x + 2)$

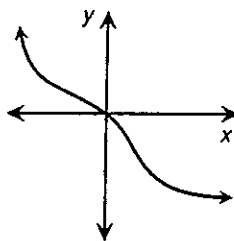**12** $x^2 + y^2 = 25$ and $y = 1 - x$

13 $y = -x^2$ and $y = x - 2$

14 $xy = 2$ and $x - 2y - 3 = 0$
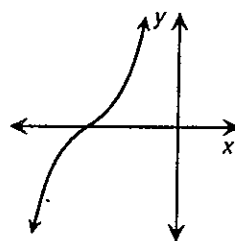
15 $2y = x^2 - 4$ and $x + 2y - 2 = 0$
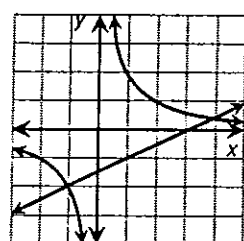
A $y = f(x)$

E _____

I _____

M _____

B _____
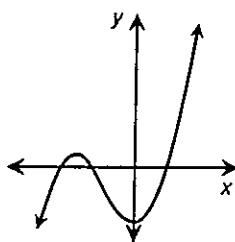
F _____

J _____

N _____
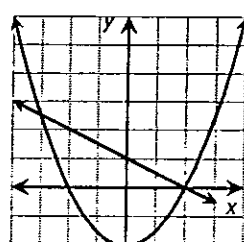
C _____
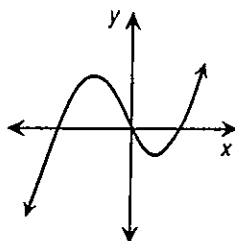
G _____
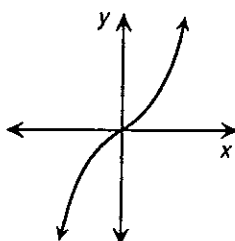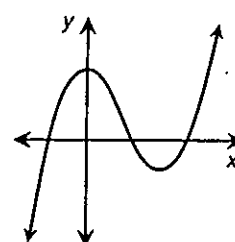
K _____

O _____

D _____

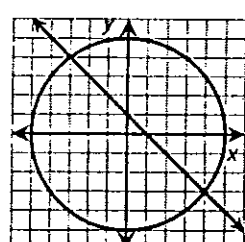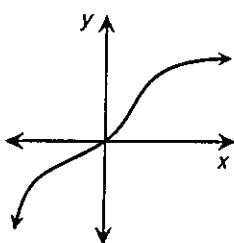**H** _____

L _____

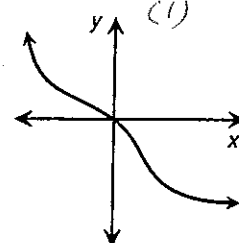**P** _____

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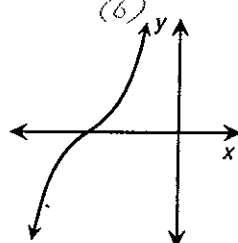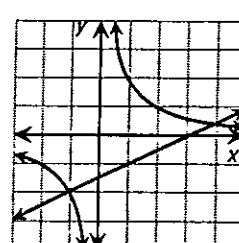**15** $2y = x^2 - 4$ and $x + 2y - 2 = 0$
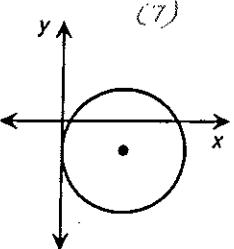
A $y = f(x)$
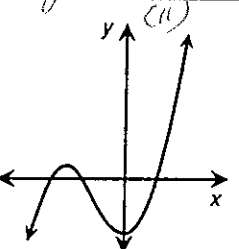
E $y = -f(x)$ (1)

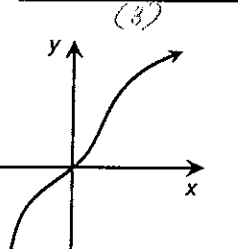**I** $y = (x + 3)^3$ (6)

M (14) $(-1, -2); (4, \frac{1}{2})$
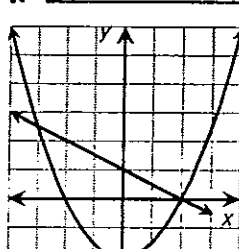
B $(x - 2)^2 + (y + 1)^2 = 4$ (7)

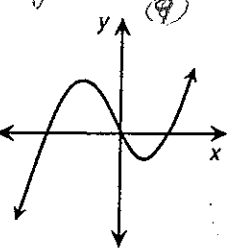**F** $y = (x^2 - 1)(x + 2)$ (11)
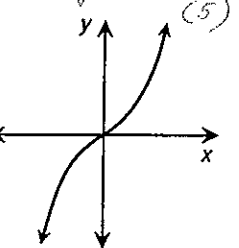
J $y = \frac{3}{2}f(x)$ (3)
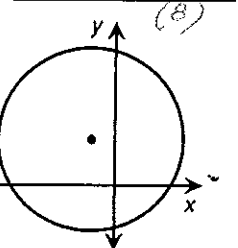
N (15) $(-3, 2\frac{1}{2}); (2, 0)$
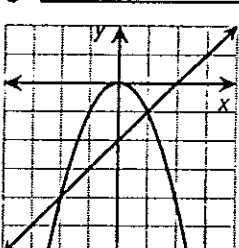
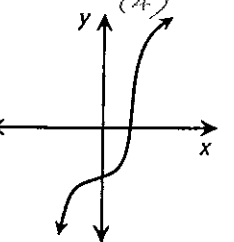**C** $y = x(x - 1)(x + 2)$ (9)

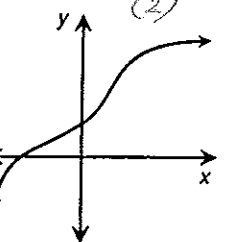**G** $y = x^3$ (5)

K $(x + 1)^2 + (y - 2)^2 = 16$ (8)

O (13) $(-2, -4); (1, -1)$

D $y = 2f(x) - 1$ (4)

H $y = f(x) + 2$ (2)

L $y = (x + 1)(x - 2)(x - 1)$ (10)

P (12) $(4, -3); (-3, 4)$