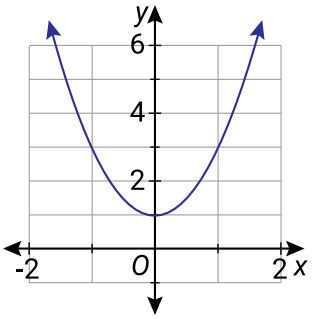
Year 9 Class 13 questions

Q1

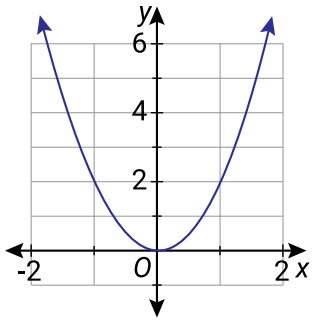
Which equation matches the graph?



- ○ $y = 1 - x^2$
- ➔ ○ $y = 2x^2 + 1$
- ○ $y = x^2 - 1$
- ○ $y = x^2$

Q2

Which equation matches the graph?



- ○ $y = x^2 - 2$
- ○ $y = x^2 + 2$
- ○ $y = 4x^2$
- ➔ ○ $y = 2x^2$

Q3

Solve $6x(x + 2) = 0$.

$x =$ [ ] or $x =$ [ ]

0 -2

Q4

Solve $7x(x + 3) = 0$.

$x =$ [ ] or $x =$ [ ]

0 -3

Q5

Solve $x^2 - 15x + 56 = 0$.

$x =$ [ ] or $x =$ [ ]

7 8

Q6

Solve $x^2 + 24 = 10x$.

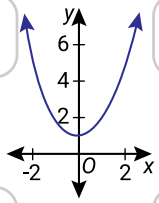
$x =$ [ ] or $x =$ [ ]

6 4

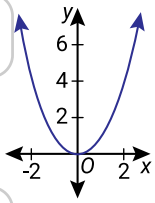
Q7

Match the graphs with their equations.

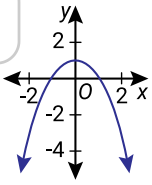
[ ] $y = x^2 + 1$



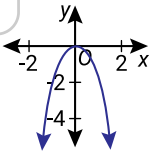
[ ] $y = x^2$



[ ] $y = -x^2 + 1$



[ ] $y = -2x^2$

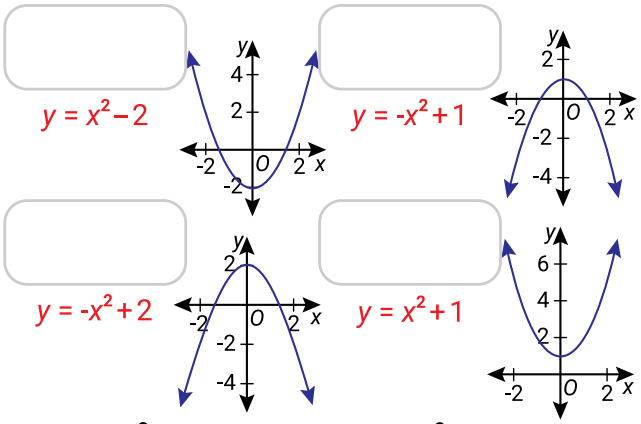


$y = x^2 + 1$ $y = -x^2 + 1$

$y = -2x^2$ $y = x^2$

Q8

Match the graphs with their equations.

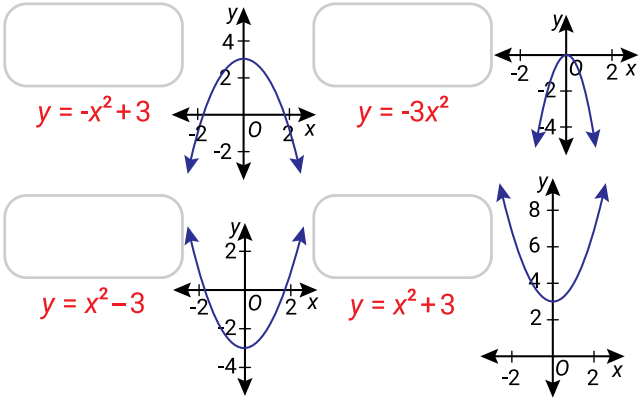


$y = -x^2 + 2$ $y = x^2 - 2$

$y = -x^2 + 1$ $y = x^2 + 1$

Q9

Match the graphs with their equations.



$y = -3x^2$ $y = x^2 - 3$

$y = -x^2 + 3$ $y = x^2 + 3$

Q10

Solve $(x-5)(4x+1) = 0$.

○ $x = -\frac{1}{4}, x = -5$ ○ $x = -4, x = 1$

→ ○ $x = -\frac{1}{4}, x = 5$ ○ $x = 4, x = -1$

Q11

Solve $(x-9)(3x-1) = 0$.

$x =$ [9] or $x =$ [ ] / [1/3]

Q12

Solve $(x-7)(6x-1) = 0$.

$x =$ [7] or $x =$ [ ] / [1/6]

Q13

Solve $x^2 + 4x - 32 = 0$.

$x =$ [-8] or $x =$ [4]

Q14

Solve $x^2 - x - 72 = 0$.

$x =$ [9] or $x =$ [-8]

Q15

Solve $x^2 + 3x - 70 = 0$.

$x =$ [-10] or $x =$ [7]

Q16

Solve $3x + x^2 = 40$.

$x =$ [5] or $x =$ [-8]

Q17

Solve $x^2 - 5x = 14$.

$x =$ [ ] or $x =$ [ ]

7 -2

Q18

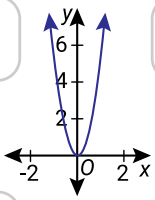
Solve $4x + x^2 = 32$.

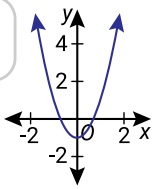
$x =$ [ ] or $x =$ [ ]

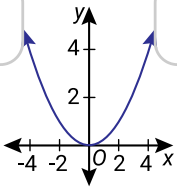
-8 4

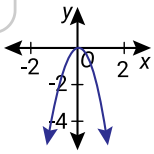
Q19

Match the graphs with their equations.

[ ] $y = 4x^2$ 

[ ] $y = 2x^2 - 1$ 

[ ] $y = \frac{1}{4}x^2$ 

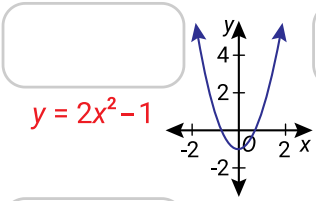
[ ] $y = -3x^2$ 

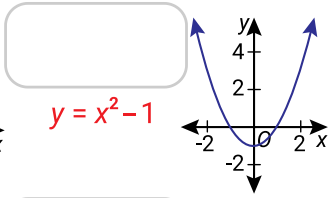
$y = \frac{1}{4}x^2$ $y = 4x^2$

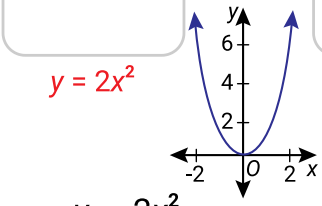
$y = -3x^2$ $y = 2x^2 - 1$

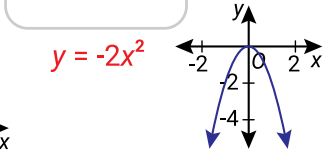
Q20

Match the graphs with their equations.

[ ] $y = 2x^2 - 1$ 

[ ] $y = x^2 - 1$ 

[ ] $y = 2x^2$ 

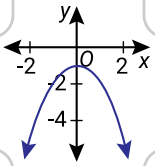
[ ] $y = -2x^2$ 

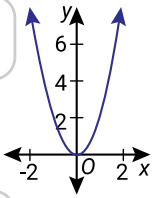
$y = -2x^2$ $y = x^2 - 1$

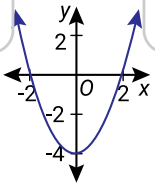
$y = 2x^2$ $y = 2x^2 - 1$

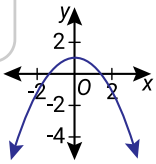
Q21

Match the graphs with their equations.

[ ] $y = -x^2 - 1$ 

[ ] $y = 2x^2$ 

[ ] $y = x^2 - 4$ 

[ ] $y = -\frac{1}{2}x^2 + 1$ 

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

$y = -x^2 - 1$ $y = -\frac{1}{2}x^2 + 1$

Q22

Solve $(5x - 1)(3x + 7) = 0$.

- ○ $x = -\frac{1}{5}, x = \frac{7}{3}$
- ○ $x = \frac{1}{5}, x = \frac{7}{3}$
- → ○ $x = \frac{1}{5}, x = -\frac{7}{3}$
- ○ $x = -\frac{1}{5}, x = -\frac{7}{3}$

Q23

Solve $(4x-3)(2x-1)=0$.

- ○ $x=-\frac{3}{4}, x=\frac{1}{2}$
- ○ $x=-\frac{3}{4}, x=2$
- → ○ $x=\frac{3}{4}, x=\frac{1}{2}$
- ○ $x=-\frac{3}{4}, x=-\frac{1}{2}$

Q24

Solve $(9x+2)(5x+1)=0$.

- ○ $x=\frac{2}{9}, x=\frac{1}{5}$
- → ○ $x=-\frac{2}{9}, x=-\frac{1}{5}$
- ○ $x=\frac{2}{9}, x=-\frac{1}{5}$
- ○ $x=-\frac{2}{9}, x=\frac{1}{5}$

Q25

Solve $2x^2-5x-12=0$.

$x=$ [ ] / [ ] (-3/2) or $x=$ [ ] (4)

Q26

Solve $2x^2-7x+5=0$.

$x=$ [ ] / [ ] (5/2) or $x=$ [ ] (1)

Q27

Solve $5x^2-17x+6=0$.

$x=$ [ ] / [ ] (2/5) or $x=$ [ ] (3)

Q28

Solve $2x^2+7x=15$.

$x=$ [ ] (-5) or [ ] (1.5)

Q29

Solve $5x^2=26x+24$.

$x=$ [ ] (-0.8) or [ ] (6)

Q30

Solve $4x^2+8x=9-27x$.

$x=$ [ ] (-9) or [ ] (0.25)