Year 9 Class 9 questions

Q1

Which equations, when graphed, give a parabola?

- [x] $y = 7 - 2x^2$
- [ ] $y = -\frac{5}{x^2}$
- [ ] $y = 2x - 7$
- [ ] $y = -\frac{3}{x^2}$

Q2

Complete the table of values.

$y = 2x^2 - 1$

x	-2	-1	0	1	2
y					
	7	1	-1	1	7

Q3

Complete the table of values.

$y = x^2 + x + 1$

x	-2	-1	0	1	2
y					
	3	1	1	3	7

Q4

Complete the table of values.

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

x	-2	-1	0	1	2
y					
	9	4	1	0	1

Q5

Complete the table of values.

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

x	-2	-1	0	1	2
y					
	8	2	-2	-4	-4

Q6

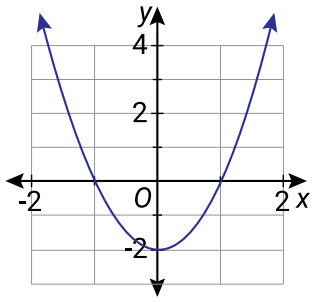
Complete the table of values.

$y = 7 - x^2$

x	-2	-1	0	1	2
y					
	3	6	7	6	3

Q7

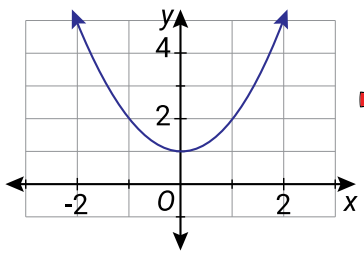
Which equation matches the graph?



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

Q8

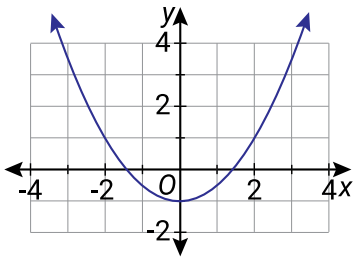
Which equation matches the graph?



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

Q9

Which equation matches the graph?



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

Q10

Choose all the points which lie on the parabola $y = x^2 - 2x - 3$.

- ➔☐ (0, -3)
- ➔☐ (3, 0)
- ➔☐ (4, 5)
- ☐ (-2, 3)

Q11

Choose all the points which lie on the parabola $y = x^2 + 3x - 1$.

- ➔☐ (-4, 3)
- ☐ (2, 6)
- ➔☐ (1, 3)
- ➔☐ (-2, -3)

Q12

Choose all the points which lie on the parabola $y = x^2 - 5$.

- ➔☐ (0, -5)
- ➔☐ (2, -1)
- ☐ (-2, 4)
- ☐ (-3, 5)

Q13

Choose all the points which lie on the parabola $y = 4 - x^2$.

- ➔☐ (-3, -5)
- ☐ (1, 4)
- ☐ (0, -4)
- ➔☐ (2, 0)

Q14

Choose all the points which lie on the parabola $y = x^2 - x - 2$.

- ☐ (-2, 7)
- ➔☐ (-1, 0)
- ➔☐ (0, -2)
- ➔☐ (3, 4)

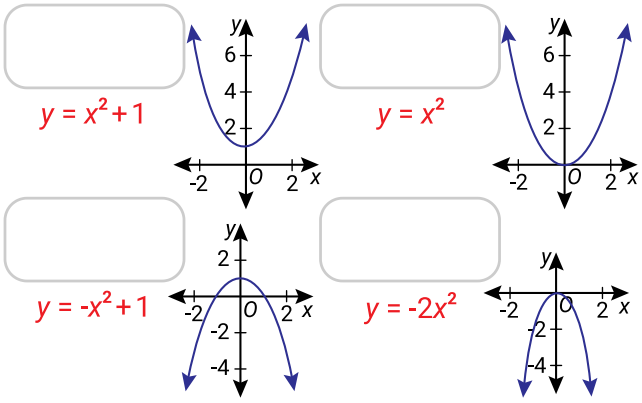
Q15

Choose all the points which lie on the parabola $y = 2x^2 - x$.

- ➔☐ (0, 0)
- ☐ (1, 2)
- ➔☐ (-1, 3)
- ➔☐ (3, 15)

Q16

Match the graphs with their equations.



$y = x^2 + 1$

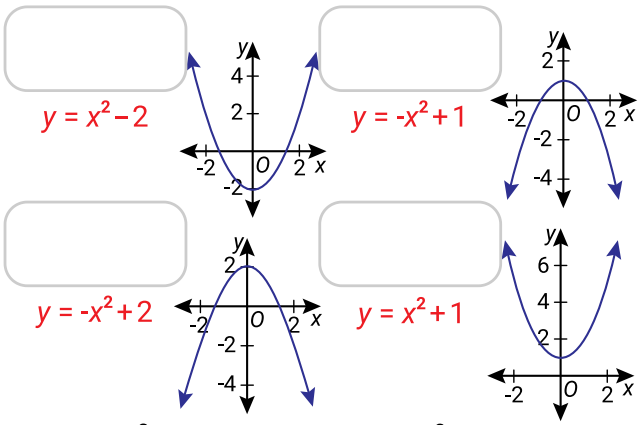
$y = -x^2 + 1$

$y = -2x^2$

$y = x^2$

Q17

Match the graphs with their equations.



$y = -x^2 + 2$

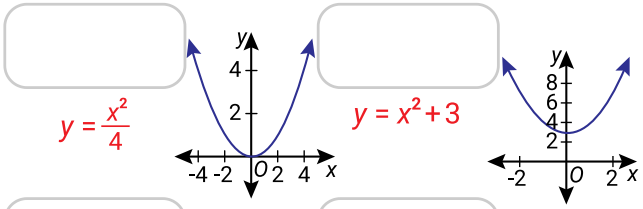
$y = x^2 - 2$

$y = -x^2 + 1$

$y = x^2 + 1$

Q18

Match the graphs with their equations.

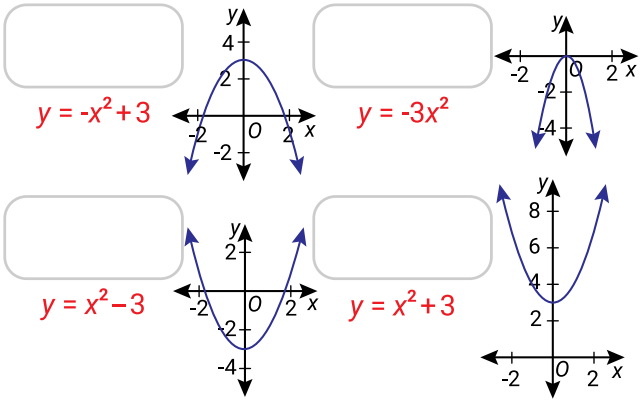


$y = \frac{x^2}{4}$ $\quad$ $y = 3x^2$

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

Q19

Match the graphs with their equations.

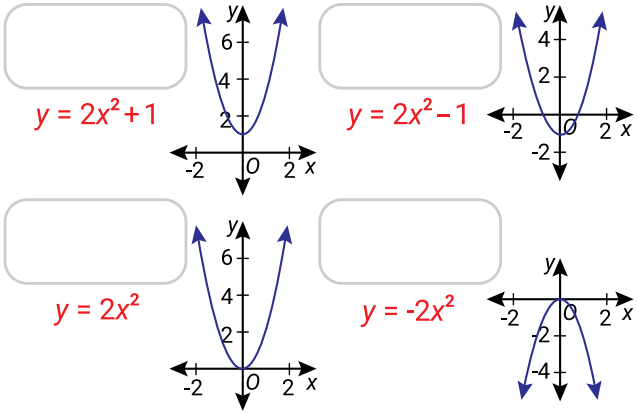


$y = -3x^2$ $\quad$ $y = x^2 - 3$

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

Q20

Match the graphs with their equations.

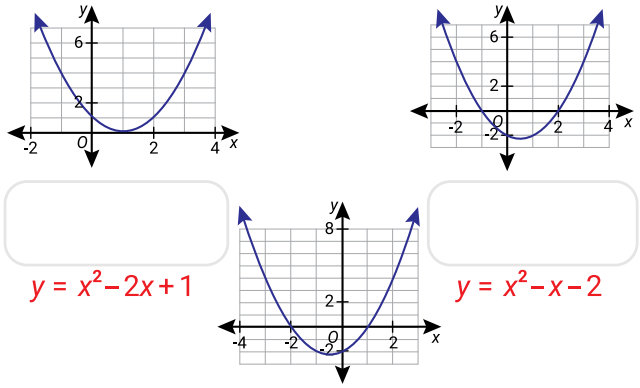


$y = -2x^2$ $\quad$ $y = 2x^2 - 1$

$y = 2x^2 + 1$ $\quad$ $y = 2x^2$

Q21

Match each equation with its graph.

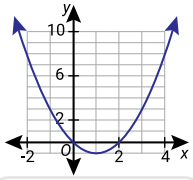


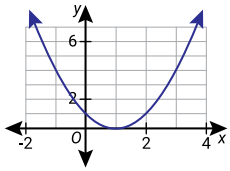
$y = x^2 + x - 2$

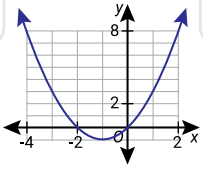
$y = x^2 - x - 2$ $\quad$ $y = x^2 + x - 2$ $\quad$ $y = x^2 - 2x + 1$

Q22

Match each equation with its graph.







$y = x^2 - 2x$

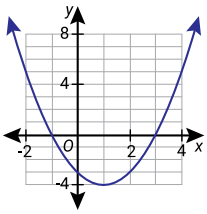
$y = x^2 - 2x + 1$

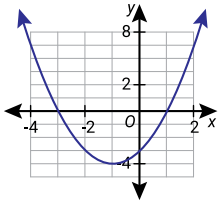
$y = x^2 + 2x$

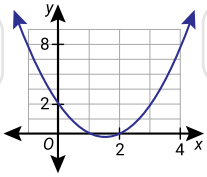
$y = x^2 + 2x$ $y = x^2 - 2x$ $y = x^2 - 2x + 1$

Q23

Match each equation with its graph.







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

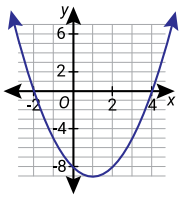
$y = x^2 + 2x - 3$

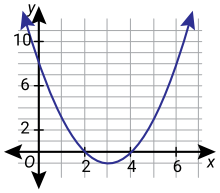
$y = x^2 - 3x + 2$

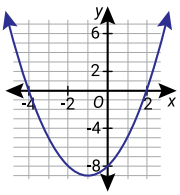
$y = x^2 - 3x + 2$ $y = x^2 + 2x - 3$ $y = x^2 - 2x - 3$

Q24

Match each equation with its graph.







$y = x^2 - 2x - 8$

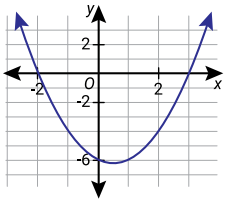
$y = x^2 - 6x + 8$

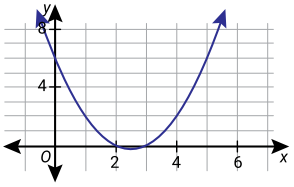
$y = x^2 + 2x - 8$

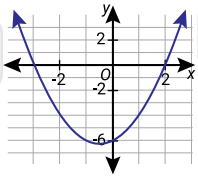
$y = x^2 + 2x - 8$ $y = x^2 - 6x + 8$ $y = x^2 - 2x - 8$

Q25

Match each equation with its graph.







$y = x^2 - x - 6$

$y = x^2 - 5x + 6$

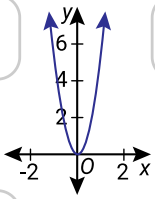
$y = x^2 + x - 6$

$y = x^2 - x - 6$ $y = x^2 - 5x + 6$ $y = x^2 + x - 6$

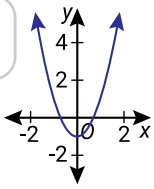
Q26

Match the graphs with their equations.

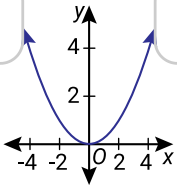
$y = 4x^2$



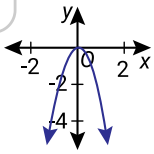
$y = 2x^2 - 1$



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



$y = -3x^2$



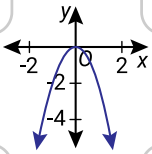
$y = \frac{1}{4}x^2$ $\quad$ $y = 4x^2$

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

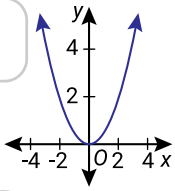
Q27

Match the graphs with their equations.

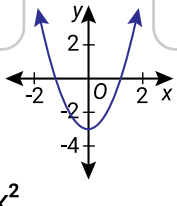
$y = -2x^2$



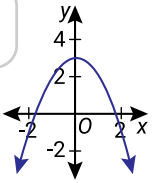
$y = \frac{1}{2}x^2$



$y = 2x^2 - 3$



$y = -x^2 + 3$



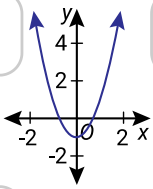
$y = \frac{1}{2}x^2$ $\quad$ $y = 2x^2 - 3$

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

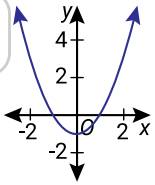
Q28

Match the graphs with their equations.

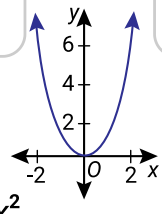
$y = 2x^2 - 1$



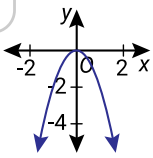
$y = x^2 - 1$



$y = 2x^2$



$y = -2x^2$



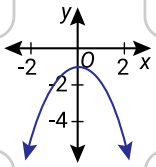
$y = -2x^2$ $\quad$ $y = x^2 - 1$

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

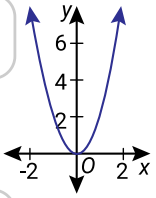
Q29

Match the graphs with their equations.

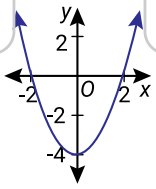
$y = -x^2 - 1$



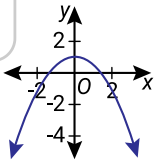
$y = 2x^2$



$y = x^2 - 4$



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

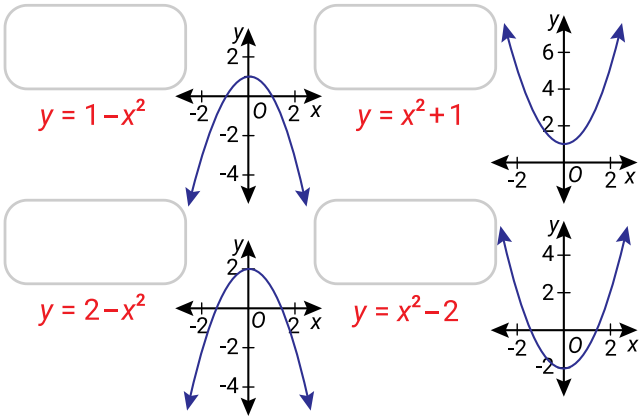


$y = x^2 - 4$ $\quad$ $y = 2x^2$

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

Q30

Match the graphs with their equations.



$y = 2 - x^2$

$y = x^2 - 2$

$y = x^2 + 1$

$y = 1 - x^2$