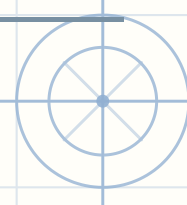


How many real solutions — X^2 on its own

Name: _____

Date: _____



How many real solutions does each equation have? Circle one.

1 $x^2 + 12x + 36 = 0$ Two / One / None

2 $x^2 - 6x + 9 = 0$ Two / One / None

3 $x^2 + 5x + 34 = 0$ Two / One / None

4 $x^2 + 18x + 71 = 0$ Two / One / None

5 $x^2 + 6x + 88 = 0$ Two / One / None

6 $x^2 - 23x - 61 = 0$ Two / One / None

7 $x^2 + 3x + 69 = 0$ Two / One / None

8 $x^2 - x + 23 = 0$ Two / One / None

9 $x^2 + 6x + 9 = 0$ Two / One / None

10 $x^2 + 19x - 34 = 0$ Two / One / None



How many real solutions · X^2 on its own — Answer key

1. $x^2 + 12x + 36 = 0$: $12^2 - 4 \times 1 \times 36 = 144 - 144 = 0 \rightarrow$
One

5. $x^2 + 6x + 88 = 0$: $6^2 - 4 \times 1 \times 88 = 36 - 352 = -316 \rightarrow$
None

9. $x^2 + 6x + 9 = 0$: $6^2 - 4 \times 1 \times 9 = 36 - 36 = 0 \rightarrow$ One

2. $x^2 - 6x + 9 = 0$: $-6^2 - 4 \times 1 \times 9 = 36 - 36 = 0 \rightarrow$ One

6. $x^2 - 23x - 61 = 0$: $-23^2 - 4 \times 1 \times -61 = 529 - -244 = 773 \rightarrow$ Two

10. $x^2 + 19x - 34 = 0$: $19^2 - 4 \times 1 \times -34 = 361 - -136 = 497 \rightarrow$ Two

3. $x^2 + 5x + 34 = 0$: $5^2 - 4 \times 1 \times 34 = 25 - 136 = -111 \rightarrow$
None

7. $x^2 + 3x + 69 = 0$: $3^2 - 4 \times 1 \times 69 = 9 - 276 = -267 \rightarrow$
None

4. $x^2 + 18x + 71 = 0$: $18^2 - 4 \times 1 \times 71 = 324 - 284 = 40 \rightarrow$ Two

8. $x^2 - x + 23 = 0$: $-1^2 - 4 \times 1 \times 23 = 1 - 92 = -91 \rightarrow$
None