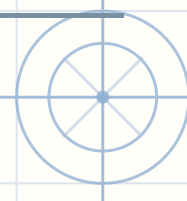


How many real solutions — A number in front of x^2

Name: _____

Date: _____



Watch the number in front of x^2 . How many real solutions? Circle one.

1 $2x^2 - 16x - 7 = 0$ Two / One / None

2 $2x^2 - 22x - 86 = 0$ Two / One / None

3 $3x^2 - 6x + 3 = 0$ Two / One / None

4 $2x^2 + 24x + 72 = 0$ Two / One / None

5 $5x^2 + 8x - 54 = 0$ Two / One / None

6 $4x^2 - 16x + 16 = 0$ Two / One / None

7 $5x^2 + 22x + 43 = 0$ Two / One / None

8 $5x^2 + 3x + 11 = 0$ Two / One / None

9 $4x^2 - 17x + 78 = 0$ Two / One / None

10 $4x^2 + 20x + 25 = 0$ Two / One / None



How many real solutions · A number in front of x^2 — Answer key

1. $2x^2 - 16x - 7 = 0$: $-16^2 - 4 \times 2 \times -7 = 256 - -56 = 312 \rightarrow$ Two

5. $5x^2 + 8x - 54 = 0$: $8^2 - 4 \times 5 \times -54 = 64 - -1080 = 1144 \rightarrow$ Two

9. $4x^2 - 17x + 78 = 0$: $-17^2 - 4 \times 4 \times 78 = 289 - 1248 = -959 \rightarrow$ None

2. $2x^2 - 22x - 86 = 0$: $-22^2 - 4 \times 2 \times -86 = 484 - -688 = 1172 \rightarrow$ Two

6. $4x^2 - 16x + 16 = 0$: $-16^2 - 4 \times 4 \times 16 = 256 - 256 = 0 \rightarrow$ One

10. $4x^2 + 20x + 25 = 0$: $20^2 - 4 \times 4 \times 25 = 400 - 400 = 0 \rightarrow$ One

3. $3x^2 - 6x + 3 = 0$: $-6^2 - 4 \times 3 \times 3 = 36 - 36 = 0 \rightarrow$ One

7. $5x^2 + 22x + 43 = 0$: $22^2 - 4 \times 5 \times 43 = 484 - 860 = -376 \rightarrow$ None

4. $2x^2 + 24x + 72 = 0$: $24^2 - 4 \times 2 \times 72 = 576 - 576 = 0 \rightarrow$ One

8. $5x^2 + 3x + 11 = 0$: $3^2 - 4 \times 5 \times 11 = 9 - 220 = -211 \rightarrow$ None