GCSE Maths Takeaway 98 - Solving Quadratic Equations using the Formula
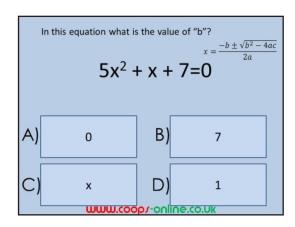
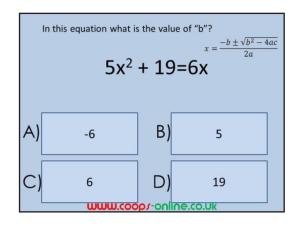Name:... Date:.....................................

In this equation what is the value of "a"?

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$2x^2 + 4x + 9 = 0$$

A) 4   B) 9

C) 2   D) 0

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Correct Answer: A B C D

Explanation:

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In this equation what is the value of "b"?

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$5x^2 + x + 7 = 0$$

A) 0   B) 7

C) x   D) 1

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Correct Answer: A B C D

Explanation:

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In this equation what is the value of "b"?

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$5x^2 + 19 = 6x$$

A) -6   B) 5

C) 6   D) 19

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Correct Answer: A B C D

Explanation:

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$$2x^2 - 3x - 4 = 0$$

a. $x = \dfrac{-3 \pm \sqrt{9 - 4 \times 2 \times 4}}{2 \times 2}$

b. $x = \dfrac{3 \pm \sqrt{-9 + 4 \times 2 \times 4}}{2 \times 2}$

c. $x = \dfrac{3 \pm \sqrt{-9 - 4 \times 2 \times 4}}{2 \times 2}$

d. $x = \dfrac{3 \pm \sqrt{9 + 4 \times 2 \times 4}}{2 \times 2}$

Correct Answer: A B C D

Explanation:

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Solve the quadratic equation

$$2x^2 - 4x - 51 = 0$$

Give your solutions correct to 3 significant figures. You must show your working.

(3)

using $ax^2 + bx + c = 0$

$a = 2 \quad b = -4 \quad c = -51$

$x = \dfrac{-b \pm \sqrt{b^2 - 4ac}}{2a} = \dfrac{-(4) \pm \sqrt{(4)^2 - 4 \times 2 \times -51}}{2 \times 2} = 4 \pm \dfrac{\sqrt{\boxed{}}}{4}$

What should go in the shaded box?

A) 392

B) 424

C) −424

D) −392

Correct Answer: A B C D

Explanation:

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