Unicorn Race: Quadratics 2

Time: 20 min Total: 13 marks

QUAD-2B

NAME or INITIALS (BLOCK CAPITALS, one letter per box)

ANSWER KEY — not for students, do not scan

ANSWERS — write each final answer in its box. Only these boxes are marked.

1	$(3x+2)(2x-1)$	2	$x=5,\ x=-2$	3	$x=2\pm\sqrt{3}$
4	$x=2,\ x=\frac{1}{2}$	5	5		

1 Factorise fully: **2 marks**

$$6x^2+x-2$$

$$(3x+2)(2x-1)$$

answer in box 1 above

2 Solve: **2 marks**

$$x(x-3)=10$$

$$x=5,\ x=-2$$

answer in box 2 above

3 Solve, giving exact answers: **3 marks**

$$x^2-4x+1=0$$

$$x=2\pm\sqrt{3}$$

answer in box 3 above

4 Solve: **3 marks**

$$x+\frac{1}{x}=\frac{5}{2}$$

$$x=2,\ x=\frac{1}{2}$$

answer in box 4 above

5 A rectangle has length $(x+3)$ cm and width x cm. Its area is $40\,\text{cm}^2$. Find the value of x. **3 marks**

$$5$$

answer in box 5 above

Work in the space under each question. Only the answer boxes above are marked.