Unicorn Race: Quadratics 1

Time: 15 min Total: 12 marks

QUAD-1B

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	$(x+2)(x+3)$	2	$(2x+1)(x+3)$	3	$(x-4)^2$
4	$x=4,\ x=-3$	5	$x=2,\ x=-\frac{1}{2}$	6	$x=\frac{2}{3},\ x=-1$

1 Factorise fully: **1 mark**

$$x^2+5x+6$$

$(x+2)(x+3)$

answer in box 1 above

2 Factorise fully: **2 marks**

$$2x^2+7x+3$$

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

answer in box 2 above

3 Factorise fully: **1 mark**

$$x^2-8x+16$$

$(x-4)^2$

answer in box 3 above

4 Solve: **2 marks**

$$x^2-x-12=0$$

$x=4,\ x=-3$

answer in box 4 above

5 Solve: **3 marks**

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

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

answer in box 5 above

6 Solve: **3 marks**

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

$x=\frac{2}{3},\ x=-1$

answer in box 6 above

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