2.10 – Quadratic equations

Student name: _____ Score: _____

1. Solve the equation.

$$2x^2 = 6 - x$$

$x =$ ....1.5............ or $x =$ ....−2............ [2]

2. Solve the equation
$$6x^2 - x - 2 = 0.$$

$x =$ ....$\dfrac{2}{3}$............ or $x =$ ....$-\dfrac{1}{2}$............ [1]

3. Solve the equation.

$$\frac{(4x+3)}{7} = \frac{7}{(4x+3)}$$

............1, ...−2.5............ [3]

4. The roots of the quadratic equation $x^2 + ax + b = 0$ are 5 and -2.

Find the value of a and the value of b.

$a =$ ....−3............

$b =$ ....−10............ [3]

5. Solve.

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

$x =$ ....3.5............ or $x =$ ....−1............ [3]

6. $$x^2 - 14x + c = (x+d)^2$$

Find the value of c and the value of d.

$c =$ ....49............

$d =$ ....−7............ [3]

7. Solve.

$$6x^2 - 5x - 6 = 0$$

$x =$ ....$-\dfrac{2}{3}$............ or $x =$ ....$\dfrac{3}{2}$............ [3]

8. Solve the equation.

$$x^2 - 5x - 24 = 0$$

$x =$ ....8............ or $x =$ ....−3............ [3]

9. Solve.

$$4w^2 - 8w - 5 = 0$$

$w =$ ....$-\dfrac{1}{2}$............ or $w =$ ....$\dfrac{5}{2}$............ [3]

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10. Solve.

$$4x^2 - 5x - 6 = 0$$

$x =$ .... or $x =$ .... [3]