UNIT 12 Formulae   Mental Tests

M 12.1 Standard Route *(no calculator)*

1. If $a = 2$ and $b = 3$, calculate:

    (a) $a + b$ (5)

    (b) $b - a$ (1)

    (c) ab (6)

2. If $x = 5$ and $y = 7$, calculate:

    (a) xy (35)

    (b) $4x$ (20)

    (c) $3y$ (21)

3. Solve the equation $3x = 6$.   (2)

4. Solve the equation $x + 5 = 9$.   (4)

5. Solve the equation $x - 2 = 1$.   (3)

6. Solve the equation $6x = 24$.   (4)

M 12.2 Academic Route *(no calculator)*

1. Calculate:

    (a) $7 - 12$ (-5)

    (b) $(-6) \times 7$ (-42)

    (c) $4 - (-7)$ (11)

    (d) $40 \div (-5)$ (-8)

2. If $a = 7$ and $b = 10$, calculate:

    (a) $a + 2b$ (27)

    (b) $a - b$ (-3)

    (c) $2ab$ (140)

3. Solve the equation $7x = 63$.   (9)

4. Solve the equation $x + 7 = 5$. (-2)

5. Solve the equation $\dfrac{x}{4} = -7$. (-28)

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M 12.3 Express Route *(no calculator)*

1. Calculate:

    (a) $(-7) \times 11$ (-77)

    (b) $-6 + (-5)$ (-11)

    (c) $-5 - (-8)$ (3)

    (d) $(-56) \div 7$ (-8)

2. If $a = 9$ and $b = -5$, calculate:

    (a) $2a + 3b$ (3)

    (b) $a + b^2$ (34)

    (c) $2a - b$ (23)

3. Solve the equation $\dfrac{x}{4} = -7$. (-28)

4. Solve the equation $2x + 1 = 9$. (4)

5. Solve the equation $3x + 7 = 1$. (-2)