

CHAPTER 2

Ex A

- 1) 7 2) 3 3) $1\frac{1}{2}$ 4) 2 5) $-\frac{3}{5}$ 6) $-\frac{7}{3}$

Ex B

- 1) 2.4 2) 5 3) 1 4) $\frac{1}{2}$

Ex C

- 1) 7 2) 15 3) $\frac{24}{7}$ 4) $\frac{35}{3}$ 5) 3 6) 2 7) $\frac{9}{5}$ 8) 5

Ex D

- 1) 34, 36, 38 2) 9.875, 29.625 3) 24, 48

Challenge Questions

Question 1

78 km
78

4

M1 for $26x + 100 - 20x = 118$

M1 for *their* $6x = \text{their } 18$

M1 for $x = \frac{\text{their } 18}{\text{their } 6}$ **soi**

Simplifying their equation to $ax = b$

Simplifying their $ax = b$ to $x = \frac{b}{a}$

Question 2

19 cards
 $x + 2x + 2x + 6 = 101$
 $5x + 6 = 101$
 $5x = 95$

19

4

M1 for $2x$ or $2x + 6$ seen (any letter)
M1 (dep) for forming equation $x + '2x' + '2x + 6' = 101$
M1 for intention to isolate x term(s) in their equation if of the form $ax + b = 101$
A1 cao dep on at least M1 awarded

OR

M1 for a correct trial with $x \geq 1$ to evaluate x , $2x$ and $2x + 6$ (algebraic expressions may not be seen)
M1 for 3 values that sum to 101
M1 for intention to add $19 + 2 \times 19 + 2 \times 19 + 6 (=101)$
A1 for 19 cao dep on at least M1 awarded

Question 3

$$x = 7$$

Question 4

$$x = -30$$

Question 5

2600 cm^2

2600

4

M1 for $40(3x - 10) = 30(x + 15) + 1400$
M1 for reducing to the form $90x = b$ or better
e.g $x = 25$
M1 for $40 \times (3 \times 25 - 10)$

A1 cao

Question 6

60 apples

Let the number of apples Andrew had be $6n$. When Boris divided the same number of apples into five piles, each pile contained two more apples than each of Andrew's piles. Therefore $6n = 5(n + 2)$ and hence $6n = 5n + 10$. This has solution $n = 10$. Therefore the number of apples Andrew had was $6 \times 10 = 60$.