FORM 1

CHAPTER 1

Summative Practice

Section A

1. Integer = Numbers without fractions or decimal numbers
   Answer: **C**

2. $168 + (-5 \times 8) - 132 \div 11$
   $= 168 + (-40) - 12$
   $= 168 - 40 - 12$
   $= 116$
   Answer: **B**

3. The number line shows multiples of 8, where $x = -24$ and $y = 8$.
   $x + y = -24 + 8$
   $\quad\quad = -16$
   Answer: **B**

4. $3\frac{1}{4} \div \left(\frac{1}{3} + \frac{5}{6}\right) - \frac{3}{4} \times \frac{2}{3}$
   $= \frac{13}{4} \div \frac{7}{6} - \frac{1}{2}$
   $= \frac{13}{4} \times \frac{6}{7} - \frac{1}{2}$
   $= \frac{78}{28} - \frac{1}{2}$
   $= \frac{64}{28}$
   $= \frac{16}{7}$
   $= 2\frac{2}{7}$
   Answer: **A**

5. Total number of students = 42
   Number of female students = 12
   3 female students did not complete their homework
   9 female students completed their homework

   Number of male students = 30

   $\frac{1}{6}(30) = 5$ male students did not complete their homework,
   25 male students completed their homework
   Number of students completed their homework = 9 + 25 = 34
   Answer: **D**

6. $-\frac{3}{5} \times (2.56 - 5) + \frac{9}{10} \div 2$
   $= -0.6 \times (-2.44) + 0.9 \div 2$
   $= -0.6 \times (-2.44) + 0.45$
   $= 1.914$
   Answer: **B**

7. Mass of 4 adults + 35.2 = 294.12
   Mass of 4 adults = 294.12 − 35.2
   $\quad\quad\quad\quad\quad\quad = 258.92$
   Average mass of 4 adults
   $= \frac{294.12 - 35.2}{4}$
   $= \frac{258.92}{4}$
   $= 64.73$
   Answer: **B**

8. $-\frac{2}{15} = -0.133$ $\quad\quad -\frac{12}{21} = -0.571$
   $-\frac{5}{7} = -0.714$

The smallest value is the number furthest to the left of 0, which is
$-\frac{5}{7} = -0.714$
Answer: **D**

9. $\dfrac{-(-28) + 6(-3)}{-5 + 1} = \dfrac{28 - 18}{-4}$
   $\quad\quad\quad\quad\quad\quad\quad = \dfrac{10}{-4}$
   $\quad\quad\quad\quad\quad\quad\quad = -2.5$
   Answer: **A**

10. Rational numbers = Numbers that can be expressed as a fraction or has a finite decimal value
    Answer: **D**

Section B

1. (a) (i)

−1	1.2	(−0.6)	2	0.2

(ii)

−1	1.2	−0.6	2	(0.2)

(b) (i)

(2.523)	0	−1.11	2.52	−2.55

(ii)

$-\frac{5}{7}$	$-\frac{7}{9}$	$-\frac{9}{11}$	$-\frac{13}{9}$	$\left(-\frac{3}{14}\right)$

Section C

1. (a) (i) $-5.8 + 0.4(10) + 12\frac{1}{2} - 0.1(5)$
   $= -5.8 + 4 + 12.5 - 0.5$
   $= 10.2°C$

   (ii) $-5.8 - 10.2 = -16.0$ or
   $10.2 - (-5.8) = 16.0$
   Difference between initial and final temperatures = 16.0°C

   (b) (i) $1\frac{3}{5} \times (-20.4) + \dfrac{6.6 - (-9.2)}{-6 + 4}$
   $= 1.6 \times (-20.4) + \dfrac{6.6 + 9.2}{-2}$
   $= 1.6 \times (-20.4) + \dfrac{15.8}{-2}$
   $= 1.6 \times (-20.4) - 7.9$
   $= -32.64 - 7.9$
   $= -40.54$

   (ii) $3.42 \times (-0.6) - \left(-2\frac{2}{5}\right) \div \left(1\frac{1}{4}\right)$
   $= 3.42 \times (-0.6) + \dfrac{12}{5} \times \left(\dfrac{4}{5}\right)$
   $= -2.052 + 1.92$
   $= -0.13$

   (c) Initial volume $= \frac{5}{8} \times 200 = 125$ litres

   Volume of water drained out
   $= \frac{3}{5} \times 125$
   $= 75$ litres
   $\frac{4}{5}$ full $= \frac{4}{5} \times 200$
   $\quad\quad\quad = 160$ litres
   Volume of water added
   $= 160 - (125 - 75)$
   $= 110$ litres