

**FOUNDATION TIER
MINI PRACTICE EXAM 11**



**NON-CALCULATOR
20 MINUTES ALLOWED**

1.
Put the following numbers in order, smallest to largest:

$$0.75 \quad \frac{3}{5} \quad \frac{7}{10} \quad \frac{13}{20}$$

$$0.6 \quad 0.7 \quad 0.65$$

$$\frac{3}{5}, \frac{13}{20}, \frac{7}{10}, 0.75$$

(2)

2.
Linda's cat, Mittens, eats 75g of cat food each day.
Linda has 6 tins of cat food.
The tins each contain 400g of cat food.

How many days can Linda feed Mittens for?

$$400 \times 6 = 2400 \text{ g}$$

$$75 \overline{) 2400} \begin{array}{r} 0032 \\ \underline{2400} \end{array}$$

32 days

(2)

3.
(a) The first four terms of a sequence are 7, 15, 23 and 31.
Find the 20th term in the sequence.

$$8n - 1$$

$$8 \times 20 - 1 = \underline{159}$$

(3)

(b) Maria says "101 is in the sequence".
Is Maria correct?

$$\begin{array}{r} 8n - 1 = 101 \\ +1 \qquad \qquad \qquad +1 \\ \hline 8n = 102 \\ \div 8 \qquad \qquad \qquad \div 8 \\ \hline n = 12.75 \end{array}$$

$$\begin{array}{r} 012.75 \\ 8 \overline{) 102.00} \end{array}$$

No

(2)

4.

(a) Rotate Shape A 90° clockwise about $(-2,0)$ and label this Shape B.

(2)

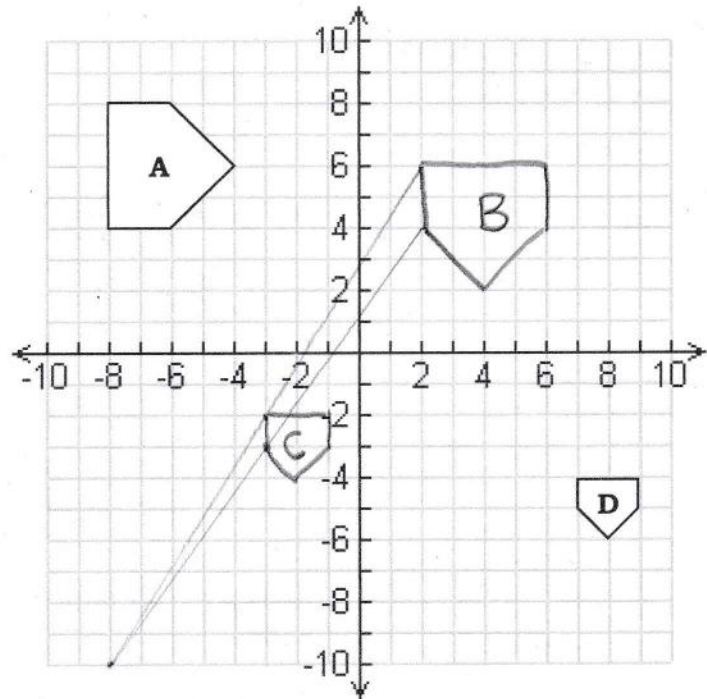
(b) Enlarge Shape B with scale factor 0.5 using $(-8,-10)$ as the centre of enlargement and label this Shape C.

(3)

(c) Describe fully the single transformation that transforms Shape C into Shape D.

Translation $\begin{pmatrix} 10 \\ -2 \end{pmatrix}$

(2)



5.

Solve the simultaneous equations:

$$4x + 3y = 27$$

$$7x - 2y = 11$$

$$\begin{array}{r} 4x + 3y = 27 \quad \times 2 \quad 8x + 6y = 54 \\ 7x - 2y = 11 \quad \times 3 \quad + \quad 21x - 6y = 33 \\ \hline 29x = 87 \\ \div 29 \quad \quad \quad \div 29 \\ x = 3 \end{array}$$

$$\begin{array}{r} 4 \times 3 + 3y = 27 \\ 12 + 3y = 27 \\ -12 \quad \quad \quad -12 \\ \hline 3y = 15 \\ \div 3 \quad \quad \quad \div 3 \\ y = 5 \end{array}$$

$$\begin{array}{l} x = 3 \\ y = 5 \end{array}$$

(4)