

Final Countdown Revision Mat 4

1) Work out
 $3\frac{3}{5} - 1\frac{6}{7}$

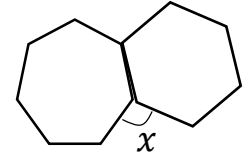
2) a) Express 0.00254 in standard form.
 b) Write 3.56×10^5 in ordinary form.
 c) Work out
 $(2.4 \times 10^5) + (1.23 \times 10^4)$
 Express your answer in standard form.

3) a) Draw a cumulative frequency graph for the following information.
 b) Estimate a value for the median.
 c) How many people weigh more than 100kg?

Weight (Kg)	Frequency
$70 < w \leq 80$	11
$80 < w \leq 90$	16
$90 < w \leq 110$	19
$110 < w \leq 120$	14

4) Solve
 $3x^2 - 2x - 8 = 0$

5) Find the Missing angle x . From these regular polygons.



6) Expand and Simplify
 $4(x - 9) - 2(x - 7)$

7) On holiday there are two companies offering an excursion to the mountains. Which company is cheaper?

Swish $\frac{2}{5}$ off £135	Zoom 15% off £125
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8) Express $x^2 + 8x + 20$ in the form $(x + p)^2 + q$.

9) Express 0.345 as a fraction.

10) There are 200 students in year 11.
 23 out of 74 boys bike to school.
 Out of the 82 students who walk to school 64 are girls.
 43 female students get the bus.
 How many students get the bus?

11) Simplify
 $\frac{2x^2 + 4x}{x^2 + 6x + 8}$

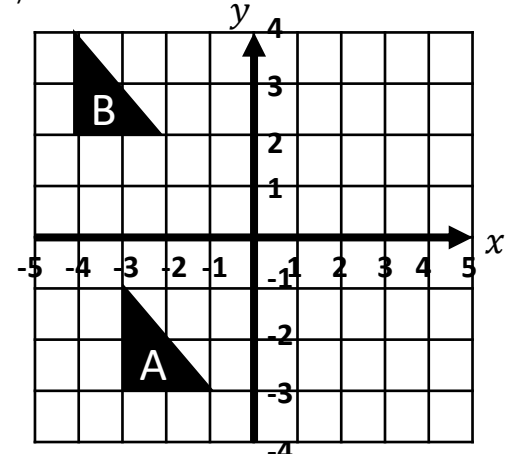
12) List two criticisms of the questionnaire.

Your favourite football team is Middlesbrough isn't it?

Yes

No

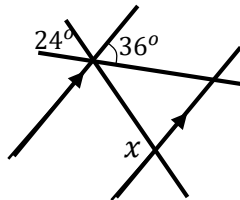
13) Describe the transformation of A to B.



Enlarge A by a scale factor of 2 from a centre $(-4, -3)$ to make shape C.

14) Find the angle OCA.

15) Calculate the size of angle x .



16) What is the equation of the line perpendicular to $y = 6 - 3x$ which passes through the point $(12, 18)$.

Challenge

M is a midpoint of the line \overline{OA} and N is a midpoint of the line \overline{OB} .
 Prove that \overline{MN} is parallel to \overline{AB} .

