


13th September	
Work out $125^{\frac{1}{3}} \times 2^{-3}$ $5 \times \frac{1}{8}$	 Corbettmaths $\frac{5}{8}$
A regular polygon has interior angles that are 5 times larger than each of its exterior angles. Calculate how many sides it has. $360 \div 30 = 12 \text{ sides}$	$x + 5x = 180$ $6x = 180$ $x = 30$ $5x = 150$
The line L passes through the points (-2, 1) and (2, 3). The line N passes through the points (4, 7) and (12, 11). Bryan says that the lines L and N are parallel. <u>yes</u>	Is Bryan correct? Explain your answer. $L: \frac{3-1}{2-(-2)} = \frac{2}{4} = \frac{1}{2}$ $N = \frac{11-7}{12-4} = \frac{4}{8} = \frac{1}{2}$
Solve $\frac{x+1}{2} + \frac{2x-1}{4} + \frac{x+2}{3} = 1$ $\frac{6(x+1)}{12} + \frac{3(2x-1)}{12} + \frac{4(x+2)}{12} = 1$ $\frac{6(x+1) + 3(2x-1) + 4(x+2)}{12} = 1$	$6x+6 + 6x-3 + 4x+8 = 12$ $16x+11 = 12$ $16x = 1$ $x = \frac{1}{16}$
The number of days, D, to complete research is inversely proportional to the number of researchers, R, who are working. $D \propto \frac{1}{R} \quad D = \frac{F}{R}$ The research takes 125 days to complete if 16 people work on it. $125 = \frac{F}{16}$ $F = 2000$	Find how many people are needed to complete the research in 40 days. $40 = \frac{2000}{R}$ $R = 50$ 50