

F Summer Trials Practice 1

- Evaluate $1 + \frac{2}{3} \div \frac{6}{7}$. $\frac{16}{9}$
- Solve $1 - \frac{u-1}{2} = \frac{u}{3} - \frac{2+3u}{4}$. $u = 24$
- The triangle ABC has a right angle at B . If $AB = 5$ and $ACB = 35^\circ$.
 - Find AC . 8.72
 - Find the area of the triangle. 17.9
- A triangle has sides 5 cm, 5 cm and 8 cm. Find the three angles in the triangle. $106, 36.9, 36.9$
- A bag contains 5 yellow and 6 red counters. Three are removed from the bag at once.
 - Find the probability that they are all the same colour. $\frac{2}{11}$
 - Find the probability that there is exactly one red. $\frac{4}{11}$
- Convert 120 m/s into km/h. 432
- If 1 GBP = 1.8 USD and 11 GBP = 14 EUR, how many EUR can you buy with 1240 USD? 876.77
- Solve $2x^2 = 8x$. $x = 0$ or $x = 4$
- Solve $2x^2 = 8$. $x = \pm 2$
- Solve $3\pi x^2 + 30\pi = 21\pi x$. $x = 2$ or $x = 5$
- Solve $1 = \frac{8}{x} - \frac{9}{x+1}$. $x = -4$ or $x = 2$
- Calculate the following, giving all answers in standard form.
 - $(4 \times 10^{20}) \times (8 \times 10^{40})$. 3.2×10^{61}
 - $\frac{(4.2 \times 10^{20}) \times (2 \times 10^{30})}{4 \times 10^{-70}}$. 2.1×10^{120}
 - $(7 \times 10^{1000}) + (8 \times 10^{999})$. 7.8×10^{1000}
- The gradient between $(p, 3)$ and $(\frac{1}{2}, 5)$ is -3 . Find p . $p = \frac{7}{6}$
- Find the equation of the line that passes through $(1, 3)$ and $(-5, 5)$, in the form $y = mx + c$. $y = -\frac{1}{3}x + \frac{10}{3}$
- Find the equation of the line which runs parallel to $3x + 2y = 7$ and passes through $(-1, 4)$. Give your answer in the form $y = mx + c$. $y = -\frac{3}{2}x + \frac{5}{2}$
- The mid point of $(p, 5)$ and $(6, q)$ is $(18, 0)$. Find p and q . $p = 30, q = -5$
- The length between $(2, -3)$ and $(p, 0)$ is $\sqrt{45}$. Find the possible values of p . $p = 8$ or $p = -4$
- One term of the sequence 9, 13, 17, 21, 25, 29, ... is 97. Which one? 23^{rd}
- Find the thousandth term of the sequence $\frac{5}{2}, \frac{7}{9}, \frac{9}{28}, \frac{11}{65}, \dots$. $\frac{2003}{1000000001}$