**Rearranging Equations**

(harder questions on next page)

Rearrange to make each of the required variables the subject

|  |  |  |
| --- | --- | --- |
| $$V=IR$$ | $R=$  |  |
| $$C=2πr$$ | $r=$  |  |
| $$A=πr^{2}$$ | $r=$  |  |
| $$v=u+at$$ | $u=$  | $a=$  |
| $$e=mc^{2}$$ | $m=$  | $c=$  |
| $$v^{2}=u^{2}+2as$$ | $u=$  | $a=$  |
| $$A=\frac{bh}{2}$$ | $b=$  |  |
| $$A=\frac{h(a+b)}{2}$$ | $h=$  | $a=$  |
| $$\frac{1}{R\_{T}}=\frac{1}{R\_{1}}+\frac{1}{R\_{2}}$$ | $R\_{1}=$  |  |
| $$x=\frac{-b\pm \sqrt{b^{2}-4ac}}{2a}$$ | $c=$  | $a=$  |

**Harder Rearranging Equations**

(where the term to become the subject features twice in the original equation)

|  |  |  |
| --- | --- | --- |
| $$y=\frac{pt}{p-t}$$ | $t=$  |  |
| $$a=\frac{2-7b}{b-5}$$ | $b=$  |  |
| $$\frac{x}{x+c}=\frac{p}{q}$$ | $x=$  |  |
| $$p=\frac{n^{2}+a}{n+a}$$ | $a=$  |  |
| $$x=\frac{p-q}{pq}$$ | $p=$  | $q=$  |
| $$5\left(x-3\right)=y(4-3x)$$ | $x=$  |  |
| $$p=\frac{3-2t}{4+t}$$ | $t=$  |  |
| $$R=\frac{ab}{a+b}$$ | $a=$  | $b=$  |
| $$y=\frac{x+1}{x+2}$$ | $x=$  |  |
| $$p=\frac{3a+5}{4-a}$$ | $a=$  |  |

Process for the harder equations is…

1. Multiply up
2. Expand brackets
3. Get $"t"$ stuff on one side
4. Factorise
5. Divide