

Maths Workout - Algebra & Problem Solving

Topic 5 - Factorising				
Target 1	Target 2	Target 3	Target 4	Target 5
<i>Identify the HCF of 2 or 3 numbers</i>	<i>Identify the HCF of up to 3 algebraic terms</i>	<i>Factorise an expression of the form $3t+6, 9ab-3b$</i>	<i>Factorise an expression of the form $ab^2+6b, 3cd^2-12d$ Factorise an expression of the form $15a^2-3ac+9ab$</i>	<i>Simplify an algebraic fraction by factorisation</i>
1. Find the HCF of two numbers by identifying the greatest factor in both lists of factors	1. Demo: Identify the HCF of 2 algebraic terms	1. Demo: Factorise an expression of the form $2t+6, 2t-6, 6+2t, 6-2t$	1. Factorise an expression of the form $b^2-6b, 6b-b^2$	1. Simplify an expression of the form $(3x+6)/3$
2. Find the HCF of two numbers by identifying the greatest factor in both lists of factors	2. Identify the HCF of 2 algebraic terms	2. Factorise an expression of the form $2t+6$ and $6+2t$	2. Factorise an expression of the form $10b^2-6b, 6b-4b^2$	2. Simplify an expression of the form $(6x+12)/2$
3. Find the HCF of two numbers by identifying the greatest factor in both lists of factors	3. Identify the HCF of 2 algebraic terms: more complex terms	3. Factorise an expression of the form $4-2t$ and $2t-4$	3. Factorise an expression of the form $ab^2+6b, 3cd^2-12d$	3. Simplify an expression of the form $(4x+8)/(x+2)$
4. Complete a Venn diagram of factors and thereby find the HCF of 20 and 24	4. Identify the HCF of 2 algebraic terms: more complex terms	4. Speed Response: Identify an expression and its factorised form.	4. Factorise an expression of the form $15a+3b+9, 10d+15e+5f$	4. Simplify an expression of the form $(4x+8)/(3x+6)$
5. Complete a Venn diagram of factors and thereby find the HCF of 24 and 36	5. Identify the HCF of 3 algebraic terms: more complex terms	5. Factorise an expression of the form $8b+14, 20c-12$	5. Factorise an expression of the form $15a^2-3a+9ab$	5. Simplify an expression of the form $(12x^2-6x)/3$
6. Complete a Venn diagram of factors and thereby find the HCF of 36 and 48	6. Identify the HCF of 3 algebraic terms: extension	6. Speed Response: Identify an expression and its factorised form.	6. Factorise an expression of the form $15a^2b-3abc+9ab^2$	6. Simplify an expression of the form $(6x^2+2x)/(3x+1)$
7. Complete a Venn diagram of factors and thereby find the HCF of 30, 32 and 48	7. Divide two terms of the type: $3x/2$ in preparation for factorising	7. Mixed examples from Tasks 2,3 and 5		7. Simplify an expression of the form $(12x-4y+2)/2$
8. Complete a Venn diagram of factors and thereby find the HCF of 48, 64 and 72	8. Divide two terms of the type: $6x^2/2x$	8. Factorise an expression of the form $ab+6b, 3b-bc$		8. Simplify an expression of the form $(12x-4y+8z)/2$
9. Find the HCF of two numbers < 100	9. Divide two terms of the type: $3pq/p$	9. Factorise an expression of the form $16ab+6b, 3cd-12c$		
10. Find the HCF of two numbers < 200	10. Mixed exercise from Tasks 7 to 9	10. Mixed examples from Tasks 8 and 9		