

Substitution into Complex Formulae, Rearranging, Expanding and Factorising

Year 8 · Algebra · y8-alg-substitute

Name: _____

Date: _____

Class: _____

Score: ____ / ____

Instructions

Answer every question in Practice. Try the Challenge section once Practice is complete. 10 questions in total.

Practice

1. Expand: $3(x + 4)$.

2. Factorise fully: $6x + 9$.

3. Expand the brackets in: $-2(x - 5)$.

4. The formula for speed is $s = d/t$. If $d = 120$ and $t = 4$, find s .

5. Rearrange $v = u + at$ to make a the subject.

6. The formula for the area of a trapezium is $A = \frac{1}{2}(a + b)h$. If $a = 6$, $b = 10$ and $h = 4$, find A .

7. Rearrange $P = 2l + 2w$ to make l the subject.

8. The negative sign must be distributed to every term inside the bracket. Expand: $-3(2x - 5)$.

Challenge

1. Expand and simplify: $3(x + 2) + 2(x - 1)$.

2. Rearrange the formula for the circumference of a circle, $C = 2\pi r$, to make r the subject, then find r when $C = 62.8$ (using $\pi \sim 3.14$).
