

Year 11 – final lesson revision

Answer the following in your books

Expand the following: C-A

$\frac{5(x+3)}{(2x+3)(x+4)}$	$\frac{8x(2x+4)}{(x+9)(x-3)}$	$\frac{(x+7)(x+3)}{(x+4)^2}$
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Prove the following: B

$8 + 4(x+3) \equiv 4x + 20$	$3(x+4) + 2(3x+9) \equiv 9x + 30$
$5(x+2) + 3(2x-8) \equiv 11x - 14$	$3(x+2) + 7(x+2) \text{ is divisible by } 4$

Factorise the following: C-A

$10x + 15$	$8x - 24$	$12x + 18$
$12x + 6$	$x^2 + 3x$	$8x^2 + 12x$
$x^2 - 100$	$x^2 - 25$	$x^2 + 10x + 16$
$x^2 + 5x + 4$	$x^2 + 2x - 15$	$x^2 - 3x - 18$

Solve the following equations

$4x - 3 = 11$	$\frac{x}{4} + 2 = 11$
$11 - 7x = 20$	$12 - 3x = 5$
$\frac{3x}{2} = 11$	$5x + 2 = 3x + 12$
$4(x+3) = 2(x+10)$	$3(2x-5) = 4(x+10)$
$\frac{(8x+2)}{(3x-1)} = 2$	$\frac{4x-2}{x+2} = 1$
$\frac{x}{3} + \frac{1}{2} = \frac{5}{6}$	$\frac{3x}{2} + 7 = \frac{1}{6}$

Simplify these indices

$x^{12} \times x^3$	$5x^2 \times 3x^7$	$4x^9y^2 \times 3x^2y^{-5}$
$(4x^2y^3)^2$	$x^0$	$\frac{8x^{12}}{4x^5}$

Find the area of the following shapes

