

Name :

HB6.1

Question 1 Expand and simplify $(x - 6)(x - 3)$	Question 2 Expand and simplify $(4x + 3)(2x - 1)$	Question 3 Simplify $8\sqrt{2} - 4\sqrt{2}$	Question 4 Simplify $8\sqrt{5} + 7\sqrt{5}$
Question 5 Find the gradient of the line $2y = 12x - 1$	Question 6 Find the gradient of the line $3y = -15x + 4$	Question 7 Work out the value of $19 + 3a$ when $a = 3$	Question 8 Work out the value of $5x^2 - 3x$ when $x = 3$
Question 9 Find the nth term: 12, 22, 32, 42,...	Question 10 Find the nth term: 3, -1, -5, -9,...	Question 11 Solve by factorising $x^2 + 8x + 16 = 0$	Question 12 Solve by factorising $x^2 + 2x - 35 = 0$
Question 13 Evaluate 4^{-1}	Question 14 Evaluate 3^{-2}	Question 15 Solve $3x + 4 < 1$	Question 16 Solve $6x - 1 > 2x + 1$
Question 17 Work out $3 \times 10^5 + 5.4 \times 10^4$	Question 18 Work out $4.2 \times 10^5 - 8.8 \times 10^4$	Question 19 Find the gradient of the line joining the points (5 , 4) and (9 , 12)	Question 20 Find the gradient of the line joining the points (0 , 2) and (-2 , -4)

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Name :

HB6.2

Question 1 Expand and simplify $(x - 1)(x - 2)$	Question 2 Expand and simplify $(5x - 4)(2x + 1)$	Question 3 Simplify $3\sqrt{3} - \sqrt{3}$	Question 4 Simplify $9\sqrt{7} - 8\sqrt{7}$
Question 5 Find the gradient of the line $2y + 4x = 1$	Question 6 Find the gradient of the line $2y = 8x + 6$	Question 7 Work out the value of $5x - 7$ when $x = -6$	Question 8 Work out the value of $2x^2 - 3x$ when $x = 4$
Question 9 Find the nth term: 4, 6, 8, 10,...	Question 10 Find the nth term: 1, -2, -5, -8,...	Question 11 Solve by factorising $x^2 + 12x + 36 = 0$	Question 12 Solve by factorising $x^2 + 2x - 15 = 0$
Question 13 Evaluate $\frac{1}{9^2}$	Question 14 Evaluate 10^{-3}	Question 15 Solve $6x + 4 > 7$	Question 16 Solve $7x + 5 < 3x + 25$
Question 17 Work out $3.8 \times 10^5 + 2.3 \times 10^4$	Question 18 Work out $2.2 \times 10^5 + 2.3 \times 10^4$	Question 19 Find the gradient of the line joining the points (4 , 3) and (8 , 19)	Question 20 Find the gradient of the line joining the points (2 , 3) and (8 , -9)

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Name :

HB6.3

Question 1 Expand and simplify $(x - 7)(x + 1)$	Question 2 Expand and simplify $(3x - 2)(5x + 3)$	Question 3 Simplify $6\sqrt{2} + 2\sqrt{2}$	Question 4 Simplify $5\sqrt{5} - 5\sqrt{5}$
Question 5 Find the gradient of the line $2y = 16x + 5$	Question 6 Find the gradient of the line $3y = 24x + 4$	Question 7 Work out the value of $15 + 2a^2$ when $a = 10$	Question 8 Work out the value of $2x^2 - x$ when $x = -2$
Question 9 Find the nth term: 15, 24, 33, 42,...	Question 10 Find the nth term: 4, 1, -2, -5,...	Question 11 Solve by factorising $x^2 - 10x + 24 = 0$	Question 12 Solve by factorising $x^2 - x - 42 = 0$
Question 13 Evaluate 2^6	Question 14 Evaluate $\frac{3}{92}$	Question 15 Solve $13x + 2 < 47.5$	Question 16 Solve $5x - 3 < 3x + 3$
Question 17 Work out $2.4 \times 10^5 - 3.3 \times 10^4$	Question 18 Work out $2.5 \times 10^4 - 1.9 \times 10^3$	Question 19 Find the gradient of the line joining the points $(-2, -5)$ and $(-7, 10)$	Question 20 Find the gradient of the line joining the points $(4, 5)$ and $(-1, 30)$

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Name :

HB6.4

Question 1 Expand and simplify $(x - 4)(x + 2)$	Question 2 Expand and simplify $(4x - 1)(2x + 1)$	Question 3 Simplify $8\sqrt{2} - \sqrt{2}$	Question 4 Simplify $\sqrt{2} + 8\sqrt{2}$
Question 5 Find the gradient of the line $2y + 4x = 4$	Question 6 Find the gradient of the line $3y = -15x - 1$	Question 7 Work out the value of $10 + y$ when $y = -5$	Question 8 Work out the value of $4x + 3x^2$ when $x = 3$
Question 9 Find the nth term: 8, 14, 20, 26,...	Question 10 Find the nth term: 1, -2, -5, -8,...	Question 11 Solve by factorising $x^2 + 12x + 35 = 0$	Question 12 Solve by factorising $x^2 - 5x - 14 = 0$
Question 13 Evaluate 2^{-4}	Question 14 Evaluate $16^{\frac{3}{4}}$	Question 15 Solve $5x + 3 < 15.5$	Question 16 Solve $7x + 4 < 3x - 8$
Question 17 Work out $3.5 \times 10^5 - 8.2 \times 10^4$	Question 18 Work out $3.5 \times 10^5 + 6.6 \times 10^4$	Question 19 Find the gradient of the line joining the points $(-5, -1)$ and $(-1, 3)$	Question 20 Find the gradient of the line joining the points $(-5, 4)$ and $(-8, -5)$

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Name :

HB6.5

Question 1 Expand and simplify $(x + 7)(x + 2)$	Question 2 Expand and simplify $(3x + 1)(5x - 2)$	Question 3 Simplify $2\sqrt{2} + 8\sqrt{2}$	Question 4 Simplify $7\sqrt{3} + 6\sqrt{3}$
Question 5 Find the gradient of the line $3y = -15x + 4$	Question 6 Find the gradient of the line $y + 2x = 1$	Question 7 Work out the value of $5a - 6$ when $a = -4$	Question 8 Work out the value of $2x^2 + 4x$ when $x = -1$
Question 9 Find the nth term: 5, 16, 27, 38,...	Question 10 Find the nth term: 2, -1, -4, -7,...	Question 11 Solve by factorising $x^2 + 7x + 6 = 0$	Question 12 Solve by factorising $x^2 - x - 20 = 0$
Question 13 Evaluate $125^{-\frac{1}{3}}$	Question 14 Evaluate $16^{-\frac{3}{2}}$	Question 15 Solve $14x + 5 < 9$	Question 16 Solve $8x - 2 < 6x - 6$
Question 17 Work out $1.5 \times 10^4 - 8.3 \times 10^3$	Question 18 Work out $3.1 \times 10^5 - 4.4 \times 10^4$	Question 19 Find the gradient of the line joining the points $(-5, 1)$ and $(-7, -7)$	Question 20 Find the gradient of the line joining the points $(3, 4)$ and $(8, 14)$

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Name :

HB6.6

Question 1 Expand and simplify $(x - 7)(x - 7)$	Question 2 Expand and simplify $(4x + 2)(3x - 2)$	Question 3 Simplify $7\sqrt{5} - 2\sqrt{5}$	Question 4 Simplify $5\sqrt{3} - 3\sqrt{3}$
Question 5 Find the gradient of the line $y + 8x = -1$	Question 6 Find the gradient of the line $y = -2x - 2$	Question 7 Work out the value of $4a - 8$ when $a = -5$	Question 8 Work out the value of $2x^2 - x$ when $x = 1$
Question 9 Find the nth term: 9, 13, 17, 21,...	Question 10 Find the nth term: 3, -4, -11, -18,...	Question 11 Solve by factorising $x^2 + 6x + 5 = 0$	Question 12 Solve by factorising $x^2 - 3x - 18 = 0$
Question 13 Evaluate $\left(\frac{1}{2}\right)^{-2}$	Question 14 Evaluate $100^{-\frac{3}{2}}$	Question 15 Solve $15x + 3 < -42$	Question 16 Solve $6x + 5 < 5x + 7$
Question 17 Work out $4.8 \times 10^5 - 2.6 \times 10^4$	Question 18 Work out $2.1 \times 10^5 - 8.3 \times 10^4$	Question 19 Find the gradient of the line joining the points $(-3, -4)$ and $(-4, -1)$	Question 20 Find the gradient of the line joining the points $(-3, 1)$ and $(1, -15)$

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Name :

HB6.7

Question 1 Expand and simplify $(x + 7)(x + 3)$	Question 2 Expand and simplify $(4x - 3)(5x + 1)$	Question 3 Simplify $3\sqrt{3} - \sqrt{3}$	Question 4 Simplify $6\sqrt{3} + \sqrt{3}$
Question 5 Find the gradient of the line $y + 7x = 3$	Question 6 Find the gradient of the line $3y = 6x + 4$	Question 7 Work out the value of $26 + 2c$ when $c = 10$	Question 8 Work out the value of $3x^2 + 4x$ when $x = 2$
Question 9 Find the nth term: 7, 10, 13, 16,...	Question 10 Find the nth term: -3, -11, -19, -27,...	Question 11 Solve by factorising $x^2 - 8x - 20 = 0$	Question 12 Solve by factorising $x^2 - 36 = 0$
Question 13 Evaluate $\left(\frac{1}{4}\right)^{-\frac{3}{2}}$	Question 14 Evaluate $\left(\frac{1}{100}\right)^{-\frac{5}{2}}$	Question 15 Solve $9x - 5 > 8.5$	Question 16 Solve $7x - 5 < 2x + 10$
Question 17 Work out $4.7 \times 10^5 - 1.5 \times 10^4$	Question 18 Work out $2.4 \times 10^4 - 1.9 \times 10^3$	Question 19 Find the gradient of the line joining the points (2 , 1) and (4 , -1)	Question 20 Find the gradient of the line joining the points (-4 , 2) and (-2 , 0)

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Score