

Name :

HA4.1

Question 1 Factorise and solve $x^2 - 2x - 3 = 0$	Question 2 Factorise and solve $x^2 - 5x - 6 = 0$	Question 3 Express in completed square form $x^2 + 6x + 20$	Question 4 Express in completed square form $x^2 + 4x - 2$
Question 5 Simplify $\frac{x}{3} + \frac{x}{2}$	Question 6 Simplify $\frac{2x}{5} - \frac{x}{6}$	Question 7 Expand and simplify $\sqrt{3}(2 + \sqrt{3})$	Question 8 Expand and simplify $\sqrt{2}(5 + \sqrt{2})$
Question 9 Find the gradient of the line $2y - 4x = 2$	Question 10 Find the gradient of the line $3y + 6x = 2$	Question 11 Simplify $2x^2y \times 3xy$	Question 12 Simplify $(3x^3y^2)^2$
Question 13 Express 124 as a product of primes	Question 14 Express 48 as a product of primes	Question 15 A price is reduced from £800 to £480. Calculate the percentage change	Question 16 A price is increased from £800 to £920. Calculate the percentage change
Question 17 Estimate $\frac{43.5 + 64.3}{9.505}$	Question 18 Estimate $11.5^2 - 2.09^3$	Question 19 Express standard form 56300000	Question 20 Express standard form 0.00125

SKILLS CHECK

Score

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Name :

HA4.1

Question 1 Factorise and solve $x^2 - 2x - 3 = 0$	Question 2 Factorise and solve $x^2 - 5x - 6 = 0$	Question 3 Express in completed square form $x^2 + 6x + 20$	Question 4 Express in completed square form $x^2 + 4x - 2$
Question 5 Simplify $\frac{x}{3} + \frac{x}{2}$	Question 6 Simplify $\frac{2x}{5} - \frac{x}{6}$	Question 7 Expand and simplify $\sqrt{3}(2 + \sqrt{3})$	Question 8 Expand and simplify $\sqrt{2}(5 + \sqrt{2})$
Question 9 Find the gradient of the line $2y - 4x = 2$	Question 10 Find the gradient of the line $3y + 6x = 2$	Question 11 Simplify $2x^2y \times 3xy$	Question 12 Simplify $(3x^3y^2)^2$
Question 13 Express 124 as a product of primes	Question 14 Express 48 as a product of primes	Question 15 A price is reduced from £800 to £480. Calculate the percentage change	Question 16 A price is increased from £800 to £920. Calculate the percentage change
Question 17 Estimate $\frac{43.5 + 64.3}{9.505}$	Question 18 Estimate $11.5^2 - 2.09^3$	Question 19 Express standard form 56300000	Question 20 Express standard form 0.00125

SKILLS CHECK

Score

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Name :

HA4.2

Question 1 Factorise and solve $x^2 + 5x - 14 = 0$	Question 2 Factorise and solve $x^2 + 4x - 12 = 0$	Question 3 Express in completed square form $x^2 - 4x + 1$	Question 4 Express in completed square form $x^2 + 8x - 2$
Question 5 Simplify $\frac{3x}{5} + \frac{x}{4}$	Question 6 Simplify $\frac{x}{3} - \frac{2x}{9}$	Question 7 Expand and simplify $\sqrt{3}(2 + 2\sqrt{3})$	Question 8 Expand and simplify $\sqrt{2}(5 + 3\sqrt{2})$
Question 9 Find the gradient of the line $2y + 2x = 5$	Question 10 Find the gradient of the line $3y - 9x = 8$	Question 11 Simplify $\frac{10x^3y^4}{2xy^3}$	Question 12 Simplify $(2x^25)^4$
Question 13 Express 144 as a product of primes	Question 14 Express 128 as a product of primes	Question 15 A price is reduced from £800 to £440. Calculate the percentage change	Question 16 A price is increased from £200 to £320. Calculate the percentage change
Question 17 Estimate $\frac{73 - 42}{0.153}$	Question 18 Estimate $\frac{9.49^2 - 52.2}{24}$	Question 19 Express standard form 102400000	Question 20 Express standard form 0.264

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Name :

HA4.2

Question 1 Factorise and solve $x^2 + 5x - 14 = 0$	Question 2 Factorise and solve $x^2 + 4x - 12 = 0$	Question 3 Express in completed square form $x^2 - 4x + 1$	Question 4 Express in completed square form $x^2 + 8x - 2$
Question 5 Simplify $\frac{3x}{5} + \frac{x}{4}$	Question 6 Simplify $\frac{x}{3} - \frac{2x}{9}$	Question 7 Expand and simplify $\sqrt{3}(2 + 2\sqrt{3})$	Question 8 Expand and simplify $\sqrt{2}(5 + 3\sqrt{2})$
Question 9 Find the gradient of the line $2y + 2x = 5$	Question 10 Find the gradient of the line $3y - 9x = 8$	Question 11 Simplify $\frac{10x^3y^4}{2xy^3}$	Question 12 Simplify $(2x^25)^4$
Question 13 Express 144 as a product of primes	Question 14 Express 128 as a product of primes	Question 15 A price is reduced from £800 to £440. Calculate the percentage change	Question 16 A price is increased from £200 to £320. Calculate the percentage change
Question 17 Estimate $\frac{73 - 42}{0.153}$	Question 18 Estimate $\frac{9.49^2 - 52.2}{24}$	Question 19 Express standard form 102400000	Question 20 Express standard form 0.264

SKILLS CHECK

Score

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Name :

HA4.3

Question 1 Factorise and solve $x^2 - 3x - 10 = 0$	Question 2 Factorise and solve $x^2 + 3x - 28 = 0$	Question 3 Express in completed square form $x^2 - 10x + 20$	Question 4 Express in completed square form $x^2 + 2x - 2$
Question 5 Simplify $\frac{4x}{3} - \frac{x}{2}$	Question 6 Simplify $\frac{5}{x} - \frac{4}{3x}$	Question 7 Expand and simplify $\sqrt{5}(2\sqrt{5} - 3)$	Question 8 Expand and simplify $3\sqrt{2}(4 - \sqrt{2})$
Question 9 Find the gradient of the line $2y + x = 3$	Question 10 Find the gradient of the line $y + x = -4$	Question 11 Simplify $5xy \times 2x^2y^3$	Question 12 Simplify $(5x^2y^4)^3$
Question 13 Express 196 as a product of primes	Question 14 Express 204 as a product of primes	Question 15 A price is reduced from £400 to £380. Calculate the percentage change	Question 16 A price is increased from £600 to £720. Calculate the percentage change
Question 17 Estimate $\frac{5.34 - 2.52}{0.0356}$	Question 18 Estimate $\sqrt{95.3} + 4.35^2$	Question 19 Express standard form 205940000000	Question 20 Express standard form 0.00509

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Score

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Name :

HA4.3

Question 1 Factorise and solve $x^2 - 3x - 10 = 0$	Question 2 Factorise and solve $x^2 + 3x - 28 = 0$	Question 3 Express in completed square form $x^2 - 10x + 20$	Question 4 Express in completed square form $x^2 + 2x - 2$
Question 5 Simplify $\frac{4x}{3} - \frac{x}{2}$	Question 6 Simplify $\frac{5}{x} - \frac{4}{3x}$	Question 7 Expand and simplify $\sqrt{5}(2\sqrt{5} - 3)$	Question 8 Expand and simplify $3\sqrt{2}(4 - \sqrt{2})$
Question 9 Find the gradient of the line $2y + x = 3$	Question 10 Find the gradient of the line $y + x = -4$	Question 11 Simplify $5xy \times 2x^2y^3$	Question 12 Simplify $(5x^2y^4)^3$
Question 13 Express 196 as a product of primes	Question 14 Express 204 as a product of primes	Question 15 A price is reduced from £400 to £380. Calculate the percentage change	Question 16 A price is increased from £600 to £720. Calculate the percentage change
Question 17 Estimate $\frac{5.34 - 2.52}{0.0356}$	Question 18 Estimate $\sqrt{95.3} + 4.35^2$	Question 19 Express standard form 205940000000	Question 20 Express standard form 0.00509

SKILLS CHECK

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Name :

HA4.4

Question 1 Factorise and solve $x^2 - 2x - 35 = 0$	Question 2 Factorise and solve $x^2 + 2x - 24 = 0$	Question 3 Express in completed square form $x^2 - 12x + 30$	Question 4 Express in completed square form $x^2 - 4x - 4$
Question 5 Simplify $\frac{6x}{5} - \frac{2x}{3}$	Question 6 Simplify $\frac{5}{x} + \frac{1}{3x}$	Question 7 Expand and simplify $\sqrt{3}(2\sqrt{3} + 1)$	Question 8 Expand and simplify $\sqrt{2}(5\sqrt{2} - 2)$
Question 9 Find the gradient of the line $4x = 1 - 4y$	Question 10 Find the gradient of the line $9 - 2y = 8x$	Question 11 Simplify $x^2y^5 \times 3x^2y^2$	Question 12 Simplify $(2x^5y^3)^5$
Question 13 Express 48 as a product of primes	Question 14 Express 81 as a product of primes	Question 15 A price is reduced from £400 to £260. Calculate the percentage change	Question 16 A price is increased from £200 to £310. Calculate the percentage change
Question 17 Estimate 3425×0.0351	Question 18 Estimate $\frac{0.609}{0.0325}$	Question 19 Express standard form 12400000000000	Question 20 Express standard form 0.0000345

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Score

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Name :

HA4.4

Question 1 Factorise and solve $x^2 - 2x - 35 = 0$	Question 2 Factorise and solve $x^2 + 2x - 24 = 0$	Question 3 Express in completed square form $x^2 - 12x + 30$	Question 4 Express in completed square form $x^2 - 4x - 4$
Question 5 Simplify $\frac{6x}{5} - \frac{2x}{3}$	Question 6 Simplify $\frac{5}{x} + \frac{1}{3x}$	Question 7 Expand and simplify $\sqrt{3}(2\sqrt{3} + 1)$	Question 8 Expand and simplify $\sqrt{2}(5\sqrt{2} - 2)$
Question 9 Find the gradient of the line $4x = 1 - 4y$	Question 10 Find the gradient of the line $9 - 2y = 8x$	Question 11 Simplify $x^2y^5 \times 3x^2y^2$	Question 12 Simplify $(2x^5y^3)^5$
Question 13 Express 48 as a product of primes	Question 14 Express 81 as a product of primes	Question 15 A price is reduced from £400 to £260. Calculate the percentage change	Question 16 A price is increased from £200 to £310. Calculate the percentage change
Question 17 Estimate 3425×0.0351	Question 18 Estimate $\frac{0.609}{0.0325}$	Question 19 Express standard form 12400000000000	Question 20 Express standard form 0.0000345

SKILLS CHECK

Score

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Name :

HA4.5

Question 1 Factorise and solve $x^2 + 3x - 10 = 0$	Question 2 Factorise and solve $x^2 + 2x - 8 = 0$	Question 3 Express in completed square form $x^2 + 4x + 14$	Question 4 Express in completed square form $x^2 + 2x + 2$
Question 5 Simplify $\frac{x+1}{2} - \frac{x}{3}$	Question 6 Simplify $\frac{10}{3x} + \frac{4}{x}$	Question 7 Expand and simplify $2\sqrt{5}(2 - 3\sqrt{5})$	Question 8 Expand and simplify $4\sqrt{2}(2\sqrt{2} - 3)$
Question 9 Find the gradient of the line $2x = 5 - 4y$	Question 10 Find the gradient of the line $12x - 2y = 21$	Question 11 Simplify $\frac{2x^4y^2}{2xy}$	Question 12 Simplify $(2xy^4)^4$
Question 13 Express 240 as a product of primes	Question 14 Express 88 as a product of primes	Question 15 A price is reduced from £600 to £480. Calculate the percentage change	Question 16 A price is increased from £800 to £960. Calculate the percentage change
Question 17 Estimate $\frac{4.53 \times 0.204}{0.00195}$	Question 18 Estimate $5.093 \times 0.599 + 1.9^2$	Question 19 Express standard form 302650000	Question 20 Express standard form 0.000546

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Name :

HA4.5

Question 1 Factorise and solve $x^2 + 3x - 10 = 0$	Question 2 Factorise and solve $x^2 + 2x - 8 = 0$	Question 3 Express in completed square form $x^2 + 4x + 14$	Question 4 Express in completed square form $x^2 + 2x + 2$
Question 5 Simplify $\frac{x+1}{2} - \frac{x}{3}$	Question 6 Simplify $\frac{10}{3x} + \frac{4}{x}$	Question 7 Expand and simplify $2\sqrt{5}(2 - 3\sqrt{5})$	Question 8 Expand and simplify $4\sqrt{2}(2\sqrt{2} - 3)$
Question 9 Find the gradient of the line $2x = 5 - 4y$	Question 10 Find the gradient of the line $12x - 2y = 21$	Question 11 Simplify $\frac{2x^4y^2}{2xy}$	Question 12 Simplify $(2xy^4)^4$
Question 13 Express 240 as a product of primes	Question 14 Express 88 as a product of primes	Question 15 A price is reduced from £600 to £480. Calculate the percentage change	Question 16 A price is increased from £800 to £960. Calculate the percentage change
Question 17 Estimate $\frac{4.53 \times 0.204}{0.00195}$	Question 18 Estimate $5.093 \times 0.599 + 1.9^2$	Question 19 Express standard form 302650000	Question 20 Express standard form 0.000546

SKILLS CHECK

Score

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Name :

HA4.6

Question 1 Factorise and solve $x^2 + 16x + 64 = 0$	Question 2 Factorise and solve $x^2 - x - 42 = 0$	Question 3 Express in completed square form $x^2 + 8x + 4$	Question 4 Express in completed square form $x^2 - 6x + 10$
Question 5 Simplify $\frac{x-2}{3} + \frac{x}{2}$	Question 6 Simplify $\frac{7}{4x} + \frac{4}{x}$	Question 7 Expand and simplify $3\sqrt{3}(5\sqrt{3} - 3)$	Question 8 Expand and simplify $5\sqrt{2}(5 - 2\sqrt{2})$
Question 9 Find the gradient of the line $4x - 8y = 1$	Question 10 Find the gradient of the line $7 + 2y - 6x = 0$	Question 11 Simplify $6x^3y \times 3y^2$	Question 12 Simplify $(10x^2y^2)^2$
Question 13 Express 150 as a product of primes	Question 14 Express 108 as a product of primes	Question 15 A price is reduced from £600 to £270. Calculate the percentage change	Question 16 A price is increased from £400 to £620. Calculate the percentage change
Question 17 Estimate $\sqrt{753} - 395$	Question 18 Estimate $\frac{756}{0.195+0.0502}$	Question 19 Express standard form 999000000000	Question 20 Express standard form 0.0009908

SKILLS CHECK

Score

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Name :

HA4.6

Question 1 Factorise and solve $x^2 + 16x + 64 = 0$	Question 2 Factorise and solve $x^2 - x - 42 = 0$	Question 3 Express in completed square form $x^2 + 8x + 4$	Question 4 Express in completed square form $x^2 - 6x + 10$
Question 5 Simplify $\frac{x-2}{3} + \frac{x}{2}$	Question 6 Simplify $\frac{7}{4x} + \frac{4}{x}$	Question 7 Expand and simplify $3\sqrt{3}(5\sqrt{3} - 3)$	Question 8 Expand and simplify $5\sqrt{2}(5 - 2\sqrt{2})$
Question 9 Find the gradient of the line $4x - 8y = 1$	Question 10 Find the gradient of the line $7 + 2y - 6x = 0$	Question 11 Simplify $6x^3y \times 3y^2$	Question 12 Simplify $(10x^2y^2)^2$
Question 13 Express 150 as a product of primes	Question 14 Express 108 as a product of primes	Question 15 A price is reduced from £600 to £270. Calculate the percentage change	Question 16 A price is increased from £400 to £620. Calculate the percentage change
Question 17 Estimate $\sqrt{753} - 395$	Question 18 Estimate $\frac{756}{0.195+0.0502}$	Question 19 Express standard form 999000000000	Question 20 Express standard form 0.0009908

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Name :

HA4.7

Question 1 Factorise and solve $x^2 + x - 20 = 0$	Question 2 Factorise and solve $x^2 + 20x + 100 = 0$	Question 3 Express in completed square form $x^2 + 2x - 1$	Question 4 Express in completed square form $x^2 - 10x + 20$
Question 5 Simplify $\frac{x-4}{3} + \frac{x}{5}$	Question 6 Simplify $\frac{x}{3} + \frac{x-4}{2}$	Question 7 Expand and simplify $4\sqrt{3}(4 - 4\sqrt{3})$	Question 8 Expand and simplify $3\sqrt{2}(5 + 3\sqrt{2})$
Question 9 Find the gradient of the line $4 - x = 3y$	Question 10 Find the gradient of the line $5x + 15y - 3 = 0$	Question 11 Simplify $\frac{16x^4y^2}{8x^3y}$	Question 12 Simplify $(2x^4y)^5$
Question 13 Express 60 as a product of primes	Question 14 Express 256 as a product of primes	Question 15 A price is reduced from £200 to £120. Calculate the percentage change	Question 16 A price is increased from £400 to £540. Calculate the percentage change
Question 17 Estimate $\frac{8.44}{0.199+0.0599}$	Question 18 Estimate $\sqrt{96 + 39.4 + 3.99}$	Question 19 Express standard form 30078000000	Question 20 Express standard form 0.0000002654

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Name :

HA4.7

Question 1 Factorise and solve $x^2 + x - 20 = 0$	Question 2 Factorise and solve $x^2 + 20x + 100 = 0$	Question 3 Express in completed square form $x^2 + 2x - 1$	Question 4 Express in completed square form $x^2 - 10x + 20$
Question 5 Simplify $\frac{x-4}{3} + \frac{x}{5}$	Question 6 Simplify $\frac{x}{3} + \frac{x-4}{2}$	Question 7 Expand and simplify $4\sqrt{3}(4 - 4\sqrt{3})$	Question 8 Expand and simplify $3\sqrt{2}(5 + 3\sqrt{2})$
Question 9 Find the gradient of the line $4 - x = 3y$	Question 10 Find the gradient of the line $5x + 15y - 3 = 0$	Question 11 Simplify $\frac{16x^4y^2}{8x^3y}$	Question 12 Simplify $(2x^4y)^5$
Question 13 Express 60 as a product of primes	Question 14 Express 256 as a product of primes	Question 15 A price is reduced from £200 to £120. Calculate the percentage change	Question 16 A price is increased from £400 to £540. Calculate the percentage change
Question 17 Estimate $\frac{8.44}{0.199+0.0599}$	Question 18 Estimate $\sqrt{96 + 39.4 + 3.99}$	Question 19 Express standard form 30078000000	Question 20 Express standard form 0.0000002654

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