Question 1	Question 2	Question 3	Question 4
Simplify $\sqrt{891}$	Simplify $\sqrt{176}$	A car bought for £36000 depreciates in value by 8% each year. Write down a formula for the value of the car v, after t years	£6000 is invested with an interest rate of 6% per annum. Write a formula for the value of the investment v, after t years
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = ½ (u + v)t to find u when s = 360, v = 20 and t = 30	Use the formula s = ½ (u + v)t to find s when u = 16, v = 16 and t = 90	Evaluate $32^{\frac{2}{5}}$	Evaluate $27^{\frac{2}{3}}$
Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a mass of 800g and a volume of 80 cm^3. Calculate the density.	A block has a mass of 160g and a density of 40 g/cm^3. Calculate the volume.	Find the nth term of 1, 7, 17, 31,...	Find the nth term of 1, 4, 9, 16,...
Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = x^2	Sketch the curve y = sin x	Find the equation of the line with gradient 4 passing through (-1 , -6)	Find the equation of the line with gradient -2 passing through (-2 , 8)
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out 4.2 × 10^5 + 8.6 × 10^4	Work out 4.2 × 10^5 + 5.7 × 10^4	Express x^2 + 10x + 30 in completed square form	Express x^2 - 4x + 7 in completed square form

SKILLS CHECK

Score

Name :   HAA1.2

Question 1	**Question 2**	**Question 3**	**Question 4**
Simplify $\sqrt{486}$	Simplify $\sqrt{350}$	A car bought for £31000 depreciates in value by 2% each year. Write down a formula for the value of the car v, after t years	A car bought for £34000 depreciates in value by 3% each year. Write down a formula for the value of the car v, after t years
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = ½(u + v)t to find s when u = 18, v = 14 and t = 100	Use the formula s = ½(u + v)t to find u when s = 1170, v = 8 and t = 90	Evaluate 7^0	Evaluate $125^{\frac{1}{3}}$
Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a mass of 200g and a density of 100 g/cm^3. Calculate the volume.	A block has a mass of 90g and a density of 60 g/cm^3. Calculate the volume.	Find the nth term of 5, 16, 33, 56,...	Find the nth term of 2, 10, 24, 44,...
Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = x^3	Sketch the curve y = cos x	Find the equation of the line with gradient 2 passing through (1 , 6)	Find the equation of the line with gradient 2 passing through (3 , 16)
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out $5.3 \times 10^4 + 4.8 \times 10^3$	Work out $2.5 \times 10^5 - 6.3 \times 10^4$	Express x^2 + 2x + 2 in completed square form	Express x^2 + 4x + 3 in completed square form

SKILLS CHECK

Score

Question 1	**Question 2**	**Question 3**	**Question 4**
Simplify √486	Simplify √1134	£9000 is invested with an interest rate of 6.5% per annum. Write a formula for the value of the investment v, after t years	£9000 is invested with an interest rate of 7.5% per annum. Write a formula for the value of the investment v, after t years
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = ½ (u + v)t to find v when s = 1000, v = 12 and t = 100	Use the formula s = ½ (u + v)t to find s when u = 20, v = 10 and t = 70	Evaluate $9^{\frac{3}{2}}$	Evaluate $16^{\frac{5}{4}}$
Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a volume of 60cm^3 and a density of 40 g/cm^3. Calculate the mass.	A block has a mass of 100g and a volume of 20 cm³. Calculate the density.	Find the nth term of 2, 8, 18, 32,...	Find the nth term of 1, 7, 17, 31,...
Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = -x^2	Sketch the curve y = 2x - 4	Find the equation of the line with gradient 5 passing through (2 , 13)	Find the equation of the line with gradient 4 passing through (-1 , 1)
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out 5.1 × 10^4 - 3.8 × 10^3	Work out 5.2 × 10^4 + 2.4 × 10^3	Express x^2 + 6x + 10 in completed square form	Express x^2 - 4x + 13 in completed square form

SKILLS CHECK

Score

Question 1	Question 2	Question 3	Question 4
Simplify √192	Simplify √125	£4000 is invested with an interest rate of 7% per annum. Write a formula for the value of the investment v, after t years	£5000 is invested with an interest rate of 9% per annum. Write a formula for the value of the investment v, after t years
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = ½(u + v)t to find u when s = 1520, v = 18 and t = 80	Use the formula s = ½(u + v)t to find s when u = 2, v = 20 and t = 30	Evaluate $36^{-\frac{3}{2}}$	Evaluate $4^{\frac{5}{2}}$
Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a mass of 780g and a volume of 60 cm^3. Calculate the density.	A block has a mass of 100g and a volume of 50 cm^3. Calculate the density.	Find the nth term of 0, 2, 6, 12,...	Find the nth term of -2, -2, 0, 4,...
Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = $\frac{1}{x^2}$	Sketch the curve y = 2 - x	Find the equation of the line with gradient -3 passing through (2 , -5)	Find the equation of the line with gradient -3 passing through (-2 , 9)
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out $2 \times 10^5 + 2 \times 10^4$	Work out $4.8 \times 10^5 + 8.6 \times 10^4$	Express x^2 - 2x - 4 in completed square form	Express x^2 + 6x + 3 in completed square form

SKILLS CHECK

Score [ ]

Question 1 Simplify √405	**Question 2** Simplify √704	**Question 3** £10000 is invested with an interest rate of 3% per annum. Write a formula for the value of the investment v, after t years	**Question 4** A car bought for £46000 depreciates in value by 7% each year. Write down a formula for the value of the car v, after t years
Question 5 Use the formula s = ½(u + v)t to find u when s = 280, v = 20 and t = 20	**Question 6** Use the formula s = ½(u + v)t to find u when s = 800, v = 12 and t = 80	**Question 7** Evaluate $4^{-\frac{3}{2}}$	**Question 8** Evaluate $81^{\frac{3}{4}}$
Question 9 A block has a mass of 700g and a density of 7 g/cm^3. Calculate the volume.	**Question 10** A block has a volume of 80cm^3 and a density of 2.5 g/cm^3. Calculate the mass	**Question 11** Find the nth term of 0, 6, 18, 36,...	**Question 12** Find the nth term of 5, 14, 27, 44,...
Question 13 Sketch the curve y = sin x	**Question 14** Sketch the curve y = -x^3	**Question 15** Find the equation of the line with gradient 3 passing through (1 , 8)	**Question 16** Find the equation of the line with gradient 5 passing through (-2 , -7)
Question 17 Work out 5.2 × 10^4 + 4.2 × 10^3	**Question 18** Work out 2.1 × 10^4 - 6.9 × 10^3	**Question 19** Express x^2 + 8x + 26 in completed square form	**Question 20** Express x^2 + 4x - 4 in completed square form

SKILLS CHECK   Score [ ]

Question 1	**Question 2**	**Question 3**	**Question 4**
Simplify $\sqrt{80}$	Simplify $\sqrt{45}$	A car bought for £28000 depreciates in value by 1% each year. Write down a formula for the value of the car v, after t years	£7000 is invested with an interest rate of 9% per annum. Write a formula for the value of the investment v, after t years
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = ½(u + v)t to find t when u = 2, v = 12 and s = 490	Use the formula s = ½(u + v)t to find v when s = 120, v = 4 and t = 10	Evaluate $27^{-\frac{4}{3}}$	Evaluate $-125^{\frac{1}{3}}$
Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a mass of 720g and a volume of 90 cm^3. Calculate the density.	A block has a mass of 840g and a volume of 70 cm^3. Calculate the density.	Find the nth term of 0, 4, 12, 24,...	Find the nth term of 5, 14, 27, 44,...
Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = cos x	Sketch the curve y = x^2 + 1	Find the equation of the line with gradient 5 passing through (-3 , -17)	Find the equation of the line with gradient -2 passing through (-3 , 4)
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out 2 × 10^5 + 9 × 10^4	Work out 3.9 × 10^4 - 6.9 × 10^3	Express x^2 - 6x + 14 in completed square form	Express x^2 + 2x + 5 in completed square form

SKILLS CHECK

Score

Question 1	**Question 2**	**Question 3**	**Question 4**
Simplify √704	Simplify √448	£8000 is invested with an interest rate of 5.5% per annum. Write a formula for the value of the investment v, after t years	A car bought for £4000 depreciates in value by 4% each year. Write down a formula for the value of the car v, after t years

Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula s = 1/2(u + v)t to find v when s = 1350, v = 14 and t = 90	Use the formula s = 1/2(u + v)t to find u when s = 400, v = 4 and t = 40	Evaluate $125^{-\frac{2}{3}}$	Evaluate $8^{\frac{7}{3}}$

Question 9	**Question 10**	**Question 11**	**Question 12**
A block has a volume of 30 cm^3 and a density of 5 g/cm^3. Calculate the mass.	A block has a mass of 630g and a volume of 90 cm^3. Calculate the density.	Find the nth term of 0, 2, 6, 12,...	Find the nth term of 0, 6, 18, 36,...

Question 13	**Question 14**	**Question 15**	**Question 16**
Sketch the curve y = 3 − x^2	Sketch the curve $y = -\frac{1}{x}$	Find the equation of the line with gradient -4 passing through (-1 , 3)	Find the equation of the line with gradient 5 passing through (-1 , -6)

Question 17	**Question 18**	**Question 19**	**Question 20**
Work out 2.6 × 10^4 - 8.2 × 10^3	Work out 1.8 × 10^5 - 7.9 × 10^4	Express x^2 - 10x + 37 in completed square form	Express x^2 - 8x + 9 in completed square form

SKILLS CHECK

Score ☐