Question 1	Question 2	Question 3	Question 4
Simplify $\sqrt{224} + 2\sqrt{14}$	Simplify $\sqrt{896} + 6\sqrt{14}$	Find the coordinates of the vertex of the graph of $y = x^2 + 12x + 36$	Find the coordinates of the vertex of the graph of $y = x^2 - 6x$
Question 5 Use the formula $v = u + at$ to find a when $v = -4$, $u = 16$ and $t = 10$	**Question 6** Use the formula $v^2 = u^2 + 2as$ to find s when $v = 4$, $u = 2$ and $a = 1$	**Question 7** Expand and simplify $(x + 2)(x + 3)(x + 1)$	**Question 8** Expand and simplify $(x - 1)(x + 2)(x - 3)$
Question 9 Write down the exact value of $\tan 45^o$	**Question 10** Write down the exact value of $\sin 30^o$	**Question 11** A block has a mass of 480g and a volume of 80 cm^3. Calculate the density.	**Question 12** A pressure of 10 N/m^2 results from a force of 140 N acting over an area x. Find x
Question 13 If $f(x) = 19 - x$ find the value of $f(0.5)$	**Question 14** If $f(x) = 30 - 4x$ find the value of $f(4)$	**Question 15** If the nth term of a sequence is $\frac{3n+2}{7n}$ what is the 7th term?	**Question 16** If the nth term of a sequence is $\frac{7n}{9n+5}$ what is the 8th term?
Question 17 Work out $8 \times 10^3 \times 8 \times 10^5$	**Question 18** Work out $(1.8 \times 10^8) \div (3 \times 10^3)$	**Question 19** Solve simultaneously $6x + 6y = 60$ and $4x + 2y = 30$	**Question 20** Solve simultaneously $4x + 6y = 24$ and $2x + 2y = 10$

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Question 1	Question 2	Question 3	Question 4
Simplify $\sqrt{686} + 4\sqrt{14}$	Simplify $\sqrt{150} + 4\sqrt{6}$	Find the coordinates of the vertex of the graph of $y = x^2 - 6x + 16$	Find the coordinates of the vertex of the graph of $y = x^2 + 4x + 5$
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula $v = u + at$ to find a when v = 50, u = 14 and t = 12	Use the formula $v^2 = u^2 + 2as$ to find v when u = 10, a = -2 and s = 24	Expand and simplify $(x - 2)(x + 3)(x - 1)$	Expand and simplify $(x + 2)(x + 2)(x + 4)$
Question 9	**Question 10**	**Question 11**	**Question 12**
Write down the exact value of $\tan 0^o$	Write down the exact value of $\tan 60^o$	A block has a volume of 8 cm^3 and a density of 90 g/cm^3. Calculate the mass.	A force of 117 N acts over an area of 13 m^2. What is the pressure?
Question 13	**Question 14**	**Question 15**	**Question 16**
If $f(x) = 20 + 3x^2$ find the value of f(1)	If $f(x) = 26 - 4x$ find the value of f(2)	If the nth term of a sequence is $\dfrac{5n}{9n-1}$ what is the 12th term?	If the nth term of a sequence is $\dfrac{4n}{7n}$ what is the 9th term?
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out $8 \times 10^2 \times 6 \times 10^3$	Work out $(1.2 \times 10^7) \div (6 \times 10^5)$	Solve simultaneously $5x - 4y = 2$ and $3x - 4y = -2$	Solve simultaneously $x + y = 7$ and $3x - y = 9$

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Question 1	Question 2	Question 3	Question 4
Simplify √250 + 6√10	Simplify √486 + 5√6	Find the coordinates of the vertex of the graph of $y = x^2 + 18x + 70$	Find the coordinates of the vertex of the graph of $y = x^2 - 10x + 30$

Question 5	Question 6	Question 7	Question 8
Use the formula v = u + at to find v when u = 12, a = 0.5 and t = 2	Use the formula $v^2 = u^2 + 2as$ to find a when u = 5, v = 10 and s = 5	Expand and simplify (x + 1)(x + 2)(x + 2)	Expand and simplify (x - 2)(x - 3)(x + 2)

Question 9	Question 10	Question 11	Question 12
Write down the exact value of sin 90°	Write down the exact value of cos 30°	A block has a mass of 800g and a density of 100 g/cm³. Calculate the volume.	A pressure of 3 N/m² results from a force of 30 N acting over an area x. Find x

Question 13	Question 14	Question 15	Question 16
If f(x) = 22 - x find the value of f(-2)	If f(x) = 21 - 2x find the value of f(-4)	If the nth term of a sequence is $\frac{3n}{12n+1}$ what is the 7th term?	If the nth term of a sequence is $\frac{5n}{7n+3}$ what is the 8th term?

Question 17	Question 18	Question 19	Question 20
Work out $6 \times 10^2 \times 4 \times 10^2$	Work out $(3.6 \times 10^4) \div (6 \times 10)$	Solve simultaneously x + y = 9 and 4x + 5y = 40	Solve simultaneously 3x - 4y = -5 and 4x - 6y = -10

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Name :

Question 1 Simplify √192 + 8√3	**Question 2** Simplify √72 + 5√2	**Question 3** Find the coordinates of the vertex of the graph of $y = x^2 + 4x + 12$	**Question 4** Find the coordinates of the vertex of the graph of $y = x^2 + 2x + 6$
Question 5 Use the formula v = u + at to find u when v = -26, a = -5 and t = 6	**Question 6** Use the formula $v^2 = u^2 + 2as$ to find v when u = 8, a = 4 and s = 10	**Question 7** Expand and simplify (x + 2)(x + 2)(x + 4)	**Question 8** Expand and simplify (x - 2)(x + 3)(x + 4)
Question 9 Write down the exact value of sin 45°	**Question 10** Write down the exact value of sin 0°	**Question 11** A block has a mass of 360g and a density of 60 g/cm³. Calculate the volume.	**Question 12** A pressure of 5 N/m² results from a force of 50 N acting over an area x. Find x
Question 13 If f(x) = 3x + 7 find the value of f(1)	**Question 14** If $f(x) = 25 + 2x^2$ find the value of f(-2)	**Question 15** If the nth term of a sequence is $\frac{3n+1}{2n+1}$ what is the 10th term?	**Question 16** If the nth term of a sequence is $\frac{7n-2}{7n}$ what is the 6th term?
Question 17 Work out $6 \times 10^4 \times 6 \times 10$	**Question 18** Work out $(1.6 \times 10^9) \div (2 \times 10^3)$	**Question 19** Solve simultaneously x + y = 5 and 2x + 3y = 13	**Question 20** Solve simultaneously 4x + 5y = 36 and 4x + 2y = 24

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Question 1	**Question 2**	**Question 3**	**Question 4**
Simplify $\sqrt{891} + 9\sqrt{11}$	Simplify $\sqrt{48} + 7\sqrt{3}$	Find the coordinates of the vertex of the graph of $y = x^2 + 14x + 45$	Find the coordinates of the vertex of the graph of $y = x^2 + 12x + 44$
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula $v = u + at$ to find v when u = 4, a = -3 and t = 8	Use the formula $v^2 = u^2 + 2as$ to find a when u = 10, v = 2 and s = 6	Expand and simplify $(x + 1)(x + 2)(x - 1)$	Expand and simplify $(x + 2)(x + 2)(x + 3$
Question 9	**Question 10**	**Question 11**	**Question 12**
Write down the exact value of $\tan 45°$	Write down the exact value of $\cos 90°$	A block has a mass of 140g and a volume of 70 cm^3. Calculate the density.	Find the force applied over an area of 14 m^2 that is needed to result in a pressure of 8 N/m^2
Question 13	**Question 14**	**Question 15**	**Question 16**
If f(x) = 29 - 3x find the value of f(2)	If f(x) = 28 - x find the value of f(2)	If the nth term of a sequence is $\frac{6n}{10n-5}$ what is the 8th term?	If the nth term of a sequence is $\frac{n^2}{n+1}$ what is the 6th term?
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out $5 \times 10^5 \times 8 \times 10^3$	Work out $(7.2 \times 10^6) \div (8 \times 10^3)$	Solve simultaneously x + y = 2 and 2x + 3y = 9	Solve simultaneously 6x - 6y = 18 and 3x + 2y = 19

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Question 1	Question 2	Question 3	Question 4
Simplify √1134 + 2√14	Simplify √112 + 3√7	Find the coordinates of the vertex of the graph of $y = x^2 + 20x + 96$	Find the coordinates of the vertex of the graph of $y = x^2 + 6x + 1$
Question 5	**Question 6**	**Question 7**	**Question 8**
Use the formula v = u + at to find u when v = 28, a = 7 and t = 2	Use the formula $v^2 = u^2 + 2as$ to find a when u = 2, v = 12 and s = 10	Expand and simplify (x + 2)(x + 2)(x + 1)	Expand and simplify (x - 2)(x + 3)(x + 1)
Question 9	**Question 10**	**Question 11**	**Question 12**
Write down the exact value of sin 60°	Write down the exact value of sin 45°	A block has a mass of 140g and a density of 70 g/cm³. Calculate the volume.	A force of 63 N acts over an area of 7 m². What is the pressure?
Question 13	**Question 14**	**Question 15**	**Question 16**
If $f(x) = 28 + 4x^2$ find the value of f(-5)	If $f(x) = 27 + 3x^2$ find the value of f(4)	If the nth term of a sequence is $\frac{n-1}{n+1}$ what is the 11th term?	If the nth term of a sequence is $\frac{n+1}{3n}$ what is the 10th term?
Question 17	**Question 18**	**Question 19**	**Question 20**
Work out $7 \times 10^3 \times 3 \times 10^4$	Work out $(8 \times 10^6) \div (4 \times 10^4)$	Solve simultaneously x + y = 10 and 2x + 5y = 35	Solve simultaneously 4x - 3y = 11 and 4x + 3y = 29

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Question 1
Simplify √45 + 6√5

Question 2
Simplify √250 + 7√10

Question 3
Find the coordinates of the vertex of the graph of $y = x^2 + 6x + 8$

Question 4
Find the coordinates of the vertex of the graph of $y = x^2 - 2x + 7$

Question 5
Use the formula v = u + at to find u when v = 52, a = 6 and t = 6

Question 6
Use the formula $v^2 = u^2 + 2as$ to find a when u = 12, v = 2 and s = 5

Question 7
Expand and simplify
(x + 2)(x + 3)(x + 1)

Question 8
Expand and simplify
(x - 2)(x - 3)(x + 4)

Question 9
Write down the exact value of cos 90⁰

Question 10
Write down the exact value of cos 45⁰

Question 11
A block has a mass of 120g and a density of 30 g/cm³. Calculate the volume.

Question 12
Find the force applied over an area of 2 m² that is needed to result in a pressure of 8 N/m2

Question 13
If f(x) = 21 - 3x find the value of f(2)

Question 14
If f(x) = 28 - x find the value of f(-3)

Question 15
If the nth term of a sequence is $\frac{2n-1}{n+1}$ what is the 8th term?

Question 16
If the nth term of a sequence is $\frac{n}{n+1}$ what is the 6th term?

Question 17
Work out $8 \times 10^3 \times 2 \times 10^2$

Question 18
Work out $(1.6 \times 10^8) \div (4 \times 10^2)$

Question 19
Solve simultaneously 4x - 5y = -7 and 3x - 2y = 0

Question 20
Solve simultaneously x + y = 6 and 6x + 2y = 28

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