

Mark scheme

End of Unit assessments are 30 marks, so you should allow 35 minutes.

The following marks are awarded for each question.

B	Unconditional accuracy mark
M	Method mark – the correct method must be shown but there may be an arithmetic error; the sight of the value given in brackets implies the award of the method mark
A	Accuracy mark – unless the question specifies that working must be shown then the sight of the correct answer implies the award of full marks (unless the answer clearly comes from incorrect working)
C	Communication mark
P	Process mark to show correct process for problem solving. Any other process of a similar standard to achieve an accurate result is acceptable to achieve this mark
cao	Correct answer only
ft	Incorrect values may be followed through from one step to the next provided that the correct method is seen in each step and the only errors are arithmetic. This is shown in mark schemes by putting a number in inverted commas
oe	Or equivalent answer mark

Non-calculator			
Q	Answer	Mark	Comment
1	-8	B1	cao
2	-8	M1	for $3p - 2p = -7 - 1$ oe
		A1	
3	14	M1	$2 \times 2^3 - 2$
		A1	cao
4	$x^2 + 5x - 24$	M1	for $x^2 - 3x + 8x - 24$ where at least 3 terms are correct or all 4 terms are correct, ignoring signs
		A1	cao
5	$3p^3$	M1	for one correct stage in simplifying e.g. $\frac{24p^7}{8p^4}$
		A1	cao
6	5	M1	$5x + 35 = 3x + 45$
		A1	cao
7	9	M1	$\frac{(-4 - 8)^2}{(2 \times 8)}$ oe
		A1	cao

8	$\frac{1}{2z}$	B1	cao
9a	$x^2 - y = -8$ An explanation that shows understanding e.g. There are no numbers (positive or negative) that multiply by themselves to give a negative answer.	C1	
9b	Cube root of -8 is -2	C1	
10	$5x + 3$	M1 A1	$x^2 + 7x - (x^2 + 2x - 3)$ oe



Calculator

Q	Answer	Mark	Comment
11	11	M1	for $60n = 740 - 80$ oe
		A1	cao
12a	$R = 35 + 1.4(0)x$	B1	cao
12b	£98	M1	for $(1.4 \times 45) + 35 = 63 + 35$
		A1	cao
13	235.2	B1	cao
14	$a = 0.825$	M1	
		A1	
15	10	M1	$4^3 + 4 \times 3^2$ oe
		A1	cao
16	66	M1	$7 \times (-3)^2 - -3$ oe e.g. $7 \times 9 + 3$
		A1	cao

Non-calculator

Question	Topic	Step	Marks
1	Solve simple two-step linear equations with integer coefficients, of the form $ax \pm b = c$.	5th	1
2	Find an unknown where it is not the subject of the formula and where an equation must be solved.	6th	2
3	Change the subject of a formula in one step e.g. $y = x + 4$	6th	2
4	Solve linear equations with integer coefficients in which the unknown appears on either side or on both sides of the equation.	8th	2
5	Substitute positive integers into expressions involving small powers (up to 3).	8th	2
6	Construct and solve equations involving brackets or unknown on both sides	7th	2

7	Substitute positive and negative integers into linear expressions and expressions involving powers.	7th	2
8	Simplify simple expressions involving index notation.	7th	1
9a	Substitute positive and negative integers into linear expressions and expressions involving powers.	7th	1
9b	Substitute positive and negative integers into linear expressions and expressions involving powers.	7th	1
10	Multiply out brackets involving positive or negative terms $(a \pm b)(c \pm d)$.	8th	2



Calculator

Question	Topic	Step	Marks
11	Substitute numbers into simple formulae.	5th	2
12a	Construct simple formulae.	5th	1
12b	Substitute numbers into simple formulae.	5th	2
13	Substitute numbers into simple formulae.	5th	1
14	Find an unknown where it is not the subject of the formula and where an equation must be solved.	7th	2
15	Substitute positive integers into expressions involving small powers (up to 3).	7th	2
16	Substitute positive and negative integers into linear expressions and expressions involving powers.	8th	2

Marks to Steps conversion table

The table below converts marks to a step on the Pearson progression scale. For more information on Progress & Assess please see the [progression website](#).

Mark boundary	Step
0	U
1	3rd
2–5	4th
6–9	5th
10–15	6th
16–21	7th
22–30	8th