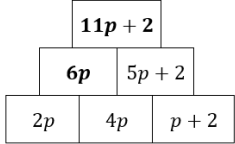


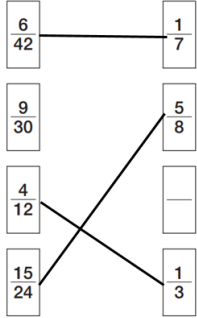
## Year 7 Autumn Higher Paper A

Question	Answer	Marks	Notes and guidance
1	0, 1, 2 or 3	1	
2	6200	1	
3	$3p^2$	1	
	$8ab$	1	
4	$\frac{9}{5}$ correctly indicated on the number line	1	
	$1\frac{4}{5}$	1	
5	0.125	1	
	64%	1	
	e.g. 6001, 5955, 5999.2, 6049.99	1	Any value $x$ in the range $5950 \leq x < 6050$
6	18	1	
	13.5	1	
7	Indicates $10 - n$	1	Accept any clear indication e.g. circled, underlined etc.
	Indicates $n^2$	1	
	e.g. 1	1	Any value $n$ in the range $n < \frac{4}{3}$

# Year 7 Autumn Higher Paper A

8	8.08	1	
	2.828	1	
9	$\frac{3}{10}$	1	Allow any equivalent fraction e.g. $\frac{30}{100}$ but do <b>not</b> allow 0.3 nor 30%
	19	1	
10	 $m = 5$	1	Completes pyramid with <b>both</b> terms correct
		2	Allow one mark for complete process with one error e.g. <ul style="list-style-type: none"> <li>• <math>8m = 35</math>(error), <math>m = \frac{35}{8} = 4.375</math></li> <li>• <math>7m = 35, m = 8</math> (error)</li> </ul>
11	207	1	
	0.25	1	Allow $\frac{25}{100}$
	95	1	
12	$\frac{73}{1000}$ or 0.073	1	Allow any equivalent value
13	49.5	1	
14	26	3	3 marks for fully correct with no wrong working.

# Year 7 Autumn Higher Paper A

			<p>If incorrect, marks as follows:</p> <p>M1 - correct method to find value of pentagon e.g. "55 - 43" or "12" seen</p> <p>M1 - correct method to find value of square e.g. "50 - 2 x their result to 55 - 43" seen</p>
15	 $\frac{3}{10}$	2	<p>Matches the three given fractions to their simpler equivalents.</p> <p>Allow one mark for two correctly matched</p>
		1	<p>Completes last box with <math>\frac{3}{10}</math> (may be matched to <math>\frac{9}{30}</math> but not necessary. Do <b>not</b> allow if matched to a different fraction)</p>
16	<p>e.g. "Divide by 3" or "<math>\div 3</math>"</p> <p><math>12t</math></p>	1	
		1	
17	<p>21.65</p> <p><math>2 \times 10^7</math></p>	1	
		1	

## Year 7 Autumn Higher Paper A

18	e.g. $\frac{3}{9} = \frac{10}{30}$ or $\frac{3}{45} = \frac{2}{30}$ etc. $\frac{100}{40} = \frac{250}{100} = 2.5$	1 1 1	Any two integers whose product is 90. 1 mark for 40, 1 for 250 – these marks are independent of each other
19	0.000 000 07 <u>0.000 000 7</u> 7 000 000    70 000 000	1	Accept any clear indication e.g. circled, underlined etc.

# Year 7 Autumn Higher Paper Mark Scheme B

Question	Answer	Marks	Notes and guidance
1	265	1	
	80 and 81	1	
2	Seventy million	1	
	Seven thousandths	1	
	500 000 000	1	
	6	1	
3	36	1	
	10	1	
	0.1 or $\frac{1}{10}$	1	
	0.1 or $\frac{1}{10}$	1	
4	482	1	
	672	1	
5	32	1	
	e.g. "the difference between the terms changes"	1	Any reasonable explanation
6	$5x$	3	Accept 35 Award 1 mark for substitution of $x = 7$ into at least three terms Award 2 <sup>nd</sup> mark for all values found correctly (49, 16, 18, 35 and 79)

## Year 7 Autumn Higher Paper Mark Scheme B

7	73	1	
	Correct explanation given e.g. "10n is always even is 10n – 7 is always odd" "The sequence starts at an odd number and goes up in 10s"	1	Accept any clear indication – circled, underlined, ticked etc. Any reasonable explanation
8	$3a^2$	1	
	$5a$	1	
9	$\frac{7}{12}, \frac{2}{3}, 0.75, \frac{5}{6}$	2	Allow answers in any form. Award 1 mark for correct conversion to same form, decimals, percentages or fractions with a common denominator.
	$4 \times 10^{-6}, 6 \times 10^{-4}, 6 \times 10^4, 4 \times 10^6,$	2	Award 1 mark if only 1 error
10	22	2	Award 1 mark for correct substitution seen
	50	2	Award 1 mark for $200 = 4c$ or equivalent
11	Any integer less than 14	1	
	One of 17, 18, 19 or 20	1	
12	27.5	2	Award 1 mark for correct method e.g. $100\% - (60\% + \text{their attempt at } \frac{1}{8} \text{ as a percentage})$ or $1 - (\frac{1}{8} + \text{their attempt at 20\% as a fraction})$

## Year 7 Autumn Higher Paper Mark Scheme B

13	$33\frac{1}{3}$	1	Accept 33.333... or similar, but do not accept 33 or 33.3
	40	1	
	250	1	
14	9 and 7 6.5, 8 and 9.5	2	Award 1 mark for each correct sequence
	250, 50, 10, 2	1	
	9 and 14	1	

Question	Answer	Marks	Notes and guidance
1	-11 in top row -6 in middle row 2 in bottom row	2	Award 1 mark for any two correct values.
2	32	2	Award 1 mark for fully correct method e.g. attempt to subtract 15 from 79 and divide their answer by 2
3	Chooses A with 11 and 10 seen	2	Award 1 mark for: <ul style="list-style-type: none"> <li>• 11 and 10 correctly evaluated but incorrect or no decision</li> <li>• One value correct and correct decision made for their values</li> </ul>
4	92 p	3	Award 1 mark for correct method to work out the total cost as $39 \times 28$ Award 1 mark for correct method to subtract £10 from their answer to $39 \times 28$ , must be consistent units either all in £ or all in pence. Award 1 mark for correct answer.
5	$\frac{8}{21}$ and $\frac{13}{21}$ on second row $\frac{4}{7}$ on bottom row	2	Award 1 mark for any two correct values.



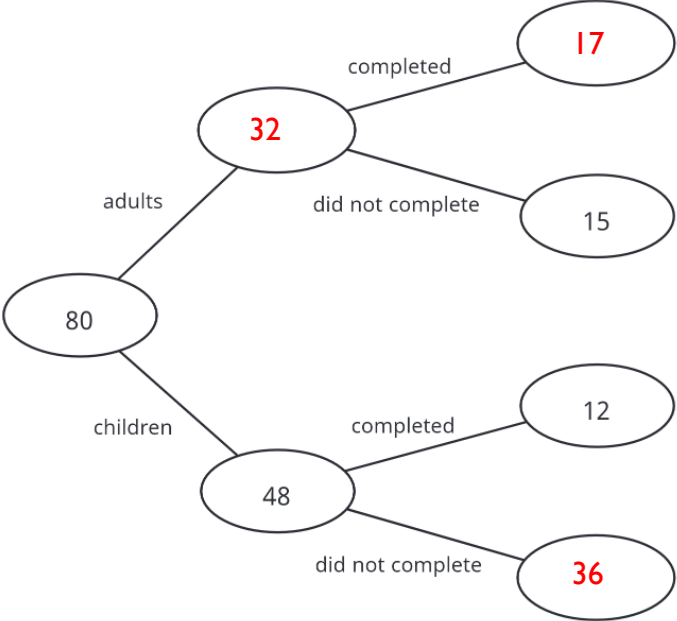
# Year 7 Spring Higher Paper

6	11	2	Award 1 mark for working out $ab = 6$ and attempting to find $c$ such that $-5 + c = 6$
7	136	2	Award 1 mark for fully correct method i.e. attempting to add 473 and 250 and then to subtract 587 from the result.
8	7.8	1	
	3.7	1	
	-4.5	2	Award 1 mark for correct first step e.g. $\frac{c}{3} = -1.5$ or $c + 10.5 = 6$
9	$3a - 3b$ in middle right circle	1	
	$a - 4b$ in bottom right circle	1	
10	36	2	Award 1 mark for fully correct method i.e. $0 \times 6 + 1 \times 9 + 2 \times 4 + 4 \times 1 + 5 \times 3$ (could also include $3 \times 0$ )
11	20	3	Award 1 mark for $B = 16$
			Award 1 mark for $A$ correctly evaluated as $2 \times$ their value of $B$ .  Award 1 mark for $C$ correctly evaluated as $640 \div$ their value of $A$ .

# Year 7 Spring Higher Paper

12	450	2	<p>Award 1 mark for fully correct method with no more than one numerical error e.g.</p> <ul style="list-style-type: none"> <li>• correct use of trapezium formula</li> <li>• splitting shape into rectangle and triangle, finding the areas and adding.</li> </ul>
13	$2.8 \times 10^6$ (or 2 800 000)	2	<p>Award 1 mark for converting both numbers correctly to ordinary form and attempting to subtract or converting <math>2 \times 10^5</math> to <math>0.2 \times 10^6</math> and attempting to subtract.</p>
14	2.6 m	2	<p>Accept 260 cm. Award 1 mark for fully correct method i.e. finding total length by multiplying 2.7 by 3 and attempting to subtract the other two lengths using consistent units.</p>
15	$1\frac{4}{15}$	2	<p>Award 1 mark for <math>\frac{19}{15}</math> or equivalent</p>
	$\frac{1}{12}$	2	<p>Accept any exact equivalent form. Award 1 mark for fully correct method i.e. valid attempt to add <math>\frac{3}{4}</math> and <math>\frac{1}{6}</math> and subtract the result from 1.</p>
16	2.725	1	<p>Accept any equivalent form.</p>
	$2\frac{11}{15}$	2	<p>Accept any equivalent form. Award 1 mark for correct method with no more than one numerical error.</p>
	$\frac{p}{2}$	1	<p>Accept any equivalent form e.g. <math>\frac{5p}{10}</math>, <math>0.5p</math> etc.</p>

# Year 7 Spring Higher Paper Mark Scheme

Question	Answer	Marks	Notes and guidance
1		2	Award 1 mark for any correct value seen
2	£775	2	Award 1 mark for attempt to find $170 \times 6$ and subtract 246 from their answer
3	0.0036	1	
	$3.6 \times 10^{-3}$	1	Follow through from their answer the first part provided this is between 0 and 1

# Year 7 Spring Higher Paper Mark Scheme

4	800 000 000	1	Allow 800000000 or 800,000,000 but do not accept commas placed incorrectly Do not accept part worded answers e.g. 800 million
	0.04	1	Do not condone additional placeholders after digit 4
5	$\frac{19}{20}$	2	Award 1 mark for correct method e.g. $\frac{1}{5} + \frac{3}{4}$ or equivalent seen Allow any equivalent answer e.g. 0.95
	-2	2	Award 1 mark for any correct reduction to one-step equation e.g. $4b = -8$ or $-4b = 8$
	$y = 5, y = -5$	2	Award 1 mark for one correct value
6	94	1	
	36	2	Award 1 mark for correct method to work out $658 \div 18$ seen e.g. 36.5 as final answer or rounding to 37
7	e.g. Filip because $\frac{50}{80} = 62.5\% < 65\%$	1	Any reasonable explanation e.g. $0.65 > 0.625$ Must include reason
8	$4 \times 10^8$	1	Accept any equivalent correct form
	$1 \times 10^9$	1	Accept any equivalent correct form
	1	1	Correct answer only
	$4\frac{7}{12}$	2	Award 1 mark for any fully correct method to find the difference between the two mixed numbers Allow any equivalent answer

# Year 7 Spring Higher Paper Mark Scheme

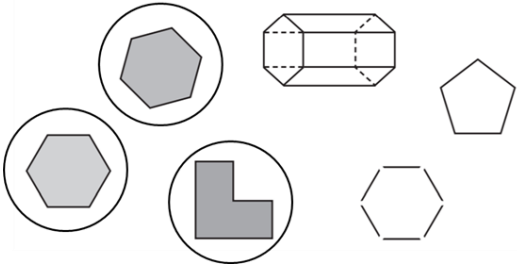
9	$12m - 7$	2	Award 1 mark for one correct term
10	$\frac{1}{8x}$	1	
	$3\frac{1}{5}, 2\frac{4}{5}$	2	Award 1 mark for 1 either term correct or difference stated as $\frac{2}{5}$
11	48	2	Award 1 mark for correct first step e.g. $10\% = 8$ or $1\% = 0.08$
12	-1	2	Award 1 mark for attempt to perform two inverse operations
	0, 1	2	Award 1 mark for each correct answer
13	80	4	Award 1 mark use of area of triangle formula to find $h$ Award 2 <sup>nd</sup> mark for $h = 8$ Award 1 mark for area of trapezium calculation e.g. $\frac{\text{their } h \times (6+14)}{2}$
14	£1850	2	Award 1 mark correct method e.g. attempt to find $148 \div 8 \times 100$

# Year 7 Summer Higher Paper

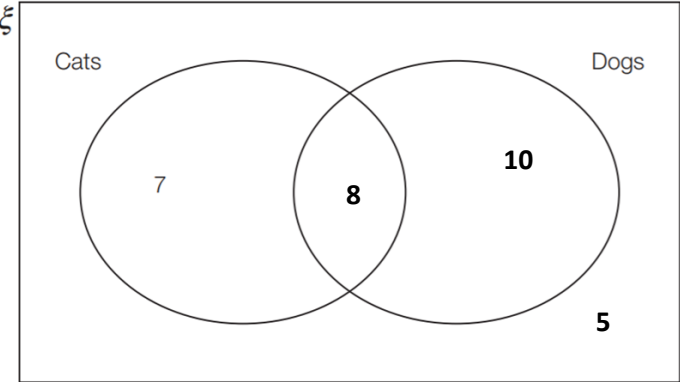


Question	Answer	Marks	Notes and guidance
1	Indicate yes with correct explanation e.g. "It only has two factors"	1	
	83 OR 89	1	
2	26	2	Award 1 mark for fully correct method i.e. attempts to divide 364 by 2 and then divide the result by 7 (allow divisions in either order)
3	e.g. 0.751, 0.76 etc.	1	Any decimal $x$ such that $0.75 < x < 0.78$
4	850.2	1	
	327	1	
5	8.25	2	Accept $8\frac{1}{4}$ etc. Award 1 mark for fully correct method i.e. attempt to divide 11 by 2, multiply the result by 3 and divide this result by 2 OR 16.5 seen
	18	1	
	$\frac{1}{24}$	1	
	62.41	2	Award 1 mark for fully correct method with no more than one numerical error

# Year 7 Summer Higher Paper

6	Indicates the correct shapes e.g. 	1	Must indicate all three hexagons and no extras.
	1080°	2	Award 1 mark for fully correct method e.g. 6 x 180° seen
7	Correct angle drawn at B (292°)	1	Allow 290 – 294°
	Draws equilateral triangle of length 7cm with construction lines clearly visible	2	Award 1 mark for equilateral triangle of any length with construction lines clearly visible OR at least one side of 7cm AND at least one correct arc
8	-8	2	Award 1 mark for correct first step e.g. $x + 3 = -5$ or $\frac{x}{5} = -1 - \frac{3}{5}$
	$3\frac{17}{20}$	2	Award 1 mark for any fully correct method
	$7a + 45$	1	

# Year 7 Summer Higher Paper

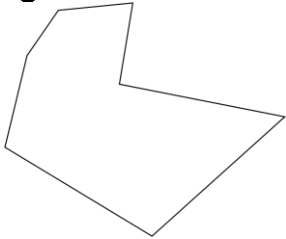
9	<p>129° with fully correct reasons e.g.  <math>\angle BCE = 51^\circ</math> (Corresponding Angles are equal)          So <math>x = 129^\circ</math> (Angles on a straight line add up to 180°)</p>	3	<p>Award 2 marks for correct answer with no incorrect working but e.g. full reasons not given</p> <p>Award 1 mark for one correct step in working e.g. using angles on a straight line, corresponding or alternate angles – may be seen on diagram, reason need not be stated if scoring just 1/3</p>
10	<p>Correctly completes diagram:</p> 	2	Award 1 mark for two of the three regions correct.
	$\frac{7}{30}$	1	



# Year 7 Summer Higher Paper

11	9	1	
	6.5 million, $2.8 \times 10^8$ , 560 000 000, 3 billion, $2.4 \times 10^{10}$	2	Accept list of numbers in any form or mixture of forms Award 1 mark for clear attempt at writing all the numbers in the same format
	560 000 000	1	Follow through the middle item of their ordered list – must have made some attempt at ordering
12	Completes the spinner with 2, any odd prime, any square of an even number e.g. 2, 3, 16 2, 11, 36 etc.	2	Award 1 mark for any two of 2, any odd prime, any square of an even number
13	Complete proof e.g. $2x + x + 20 + 55 = 180$ $3x + 75 = 180$ $x = 35$ Angles are 55, 55 and 70 Two are equal, so the triangle is isosceles	3	Award 1 mark for forming a correct equation in $x$  Award a second mark for solving equation correctly and attempting to find the angles in the triangle

# Year 7 Summer Higher Paper Mark Scheme

Question	Answer	Marks	Notes and guidance
1	500 000 000	1	Allow use of commas (500,000,000) provided these are not incorrectly placed.
	$5 \times 10^8$	1	
	$1 \times 10^{-6}$	1	
2	e.g. 	1	Allow any closed 7-sided polygon.
3	e.g. $125 \times 6 = 25 \times 5 \times 6 = 25 \times 30 = 30 \times 25$	1	Any correct reasoning e.g. showing both expressions have the same factors or a chain of equivalent calculations as shown.
	e.g. $14x = 94 \times 2 = 188$ $14x + 12 = 188 + 12 = 200$	1	Allow any clear correct chain of reasoning
4	3.5	1	
	$\frac{n-3}{2}$	1	Allow $(n - 3) \div 2$ but do not allow $n - 3 \div 2$
5	$b$	1	
	$d$	1	

# Year 7 Summer Higher Paper Mark Scheme

6	85	3	Award 1 mark for correctly finding $\frac{2}{7}$ of 301 = 86 Award 1 mark for correctly finding $\frac{7}{5}$ of 60 = 84
7	23	3	Award 1 mark for using B to find total number of people is 60 or each person is represented by $6^\circ$ Award 1 mark for correctly finding 10 people chose A
8	49.6	1	Allow equivalent answer in standard form
	8.04	1	Allow equivalent answer in standard form
	1600	1	
9	$x = 0.85$	2	Award 1 mark for correct first step e.g. adding 1.2 to both sides or dividing all three terms by 2
	$y = 0.2$	2	Award 1 mark for any correct first step to solve the equation e.g. rearranging to obtain $1.2 - \frac{4}{5} = 2y$ or subtracting 1.2 from both sides to obtain $-2y = -0.4$ or equivalent
10	1, 4, 6, 8, 9, 10	1	Accept elements in any order.
	$\frac{1}{2}$	2	Accept equivalent answers. Award 1 mark for correct listing of A $\cup$ B
11	18	2	Award 1 mark for identifying common factors 2 and $3^2$
	$2^3 \times 3^4 \times 5^2$	1	Accept any clear indication, circled, underlined etc.

# Year 7 Summer Higher Paper Mark Scheme

12	$\frac{1}{x}$	1	
	$2ab^2$	2	Award 1 mark for any two of 2, $a$ or $b^2$ seen as factors in their simplified expression.
13	6	1	
	-1	1	
	-27	1	
14	$\frac{2}{3}$	2	Allow $\frac{4}{6}$ or equivalent. Award 1 mark for common difference of $\frac{1}{6}$ or equivalent found.
	9	1	
15	$x + y + \angle ACB = 180$ (angles in a triangle add up to $180^\circ$ ) $a + \angle ACB = 180$ (angles on a straight line add up to $180^\circ$ ) $\therefore a = x + y$	2	Any correct chain of reasoning Award 1 mark for correct working without reasons OR attempt to use angles on a straight line add up to $180^\circ$ and angles in a triangle add up to $180^\circ$