

Q1 June 2018

|   |  |     |    |     |
|---|--|-----|----|-----|
| 3 |  | 243 | B1 | cao |
|---|--|-----|----|-----|

Q2 June 2020

|   |  |    |    |     |
|---|--|----|----|-----|
| 5 |  | 27 | B1 | cao |
|---|--|----|----|-----|

Q3 Nov 2017

|        |  |       |    |                                                                                                                                   |
|--------|--|-------|----|-----------------------------------------------------------------------------------------------------------------------------------|
| 21 (a) |  | 6     | B1 | cao                                                                                                                               |
| (b)    |  | 5     | B1 | cao                                                                                                                               |
| (c)    |  | Shown | M1 | for writing $100^a$ or $1000^b$ as a power of 10 ( $=10^{2a}$ or $10^{3b}$ ) or $10^{2a+3b}$<br>or $100 = 10^2$ and $1000 = 10^3$ |
|        |  |       | C1 | for complete chain of reasoning leading to conclusion                                                                             |

Q4 Nov 2018

|   |            |    |                                                        |
|---|------------|----|--------------------------------------------------------|
| 2 | odd square | B1 | stating an odd square number eg 1, 9, 25, 49, 81, etc. |
|---|------------|----|--------------------------------------------------------|

Q5 Nov 2018

|   |  |   |    |     |
|---|--|---|----|-----|
| 4 |  | 4 | B1 | cao |
|---|--|---|----|-----|

Q6 Nov 2019

|   |  |     |    |                                     |
|---|--|-----|----|-------------------------------------|
| 4 |  | 4.2 | B1 | for 4.2 <b>or</b> $\frac{21}{5}$ oe |
|---|--|-----|----|-------------------------------------|

Q7 Nov 2019

|   |  |      |    |     |
|---|--|------|----|-----|
| 5 |  | 7776 | B1 | cao |
|---|--|------|----|-----|

Q8 Nov 2020

|   |  |    |    |     |
|---|--|----|----|-----|
| 5 |  | 27 | B1 | cao |
|---|--|----|----|-----|

Q9 Nov 2021

|       |  |    |    |     |
|-------|--|----|----|-----|
| 6 (a) |  | 25 | B1 | cao |
| (b)   |  | 24 | B1 | cao |

Q10 Nov 2023

|   |                        |    |                               |                                                           |
|---|------------------------|----|-------------------------------|-----------------------------------------------------------|
| 4 | One of: 16, 25, 36, 49 | B1 | for one correct square number | Allow more than 1 correct square number but no incorrect. |
|---|------------------------|----|-------------------------------|-----------------------------------------------------------|

Q11 Nov 2024

|   |     |               |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                   |
|---|-----|---------------|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 8 | (a) | No and reason | C1 | <p>No <b>and</b> reason</p> <p><b>Acceptable examples</b><br/>           No, because <math>10^2 = 100</math> <b>or</b> <math>10^2</math> is <math>10 \times 10</math><br/> <math>4^2 = 16</math> and <math>5^2 = 25</math> so 20 is not a square number<br/>           Junaid is wrong because <math>\sqrt{20} \neq 10</math> <b>or</b> <math>\sqrt{20} = 4.47...</math><br/>           Incorrect because 20 is <math>2 \times 10</math> not <math>10 \times 10</math><br/>           No she multiplied by 2 instead of squaring <b>or</b> <math>10^2</math> is not <math>10 \times 2</math><br/>           Wrong as she added instead of multiplying</p> <p><b>Not acceptable examples</b><br/>           Yes....<br/>           No because 20 is <math>10 \times 2</math><br/>           Incorrect because 20 is not a square number<br/>           No because <math>10^2</math> is not 20<br/>           No because she added<br/>           No because a square number is when a number is multiplied by itself</p> |                                                                                                                                   |
|   | (b) | example       | C1 | <p>for a correctly evaluated example,<br/>           eg <math>12 \div 4 = 3</math> or <math>10 \div 2 = 5</math> or <math>2 \div 4 = 0.5</math></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Accept rounded and truncated values,<br/>           eg <math>2 \div 6 = 0.3(..)</math>, <math>100 \div 6 = 16.6(..)</math></p> |