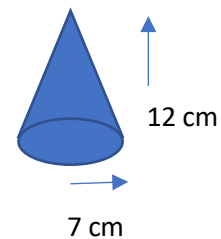
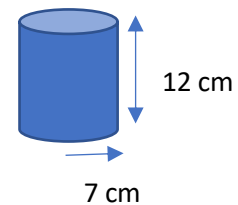
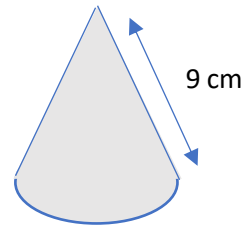


	S3 Nat 5 December Test – Revision 1	24
1	Simplify $14a^3 \times \frac{1}{2}a^6$	2
2	Simplify (a) $\sqrt{99} + \sqrt{11}$ (b) $\sqrt{20} \times \sqrt{5}$	2 2
3	Calculate $3960 \div 0.00056$. Give your answer in scientific notation correct to 2 significant figures	3
4	A sector of a circle has an interior angle of 32° and a radius of 9 cm. Calculate (a) The length of the arc (b) The area of the sector	3 3
5	(a) A cylinder has a radius of 7 cm and a height of 12 cm. Calculate the volume of this cylinder to the nearest whole number (b) A cone also has a radius of 7cm and a height of 12 cm. Calculate the volume of this cone	3 2
6	Multiply out the brackets and collect like terms $(2x + 5)(x - 3)$	2
7	Change the subject of the formula $T = 3a + 7$ to a	2



Extra Practice	
1	Indices Examples on page 175 Question 4 on page 175, Question 7 on page 178
2	Surds Examples on page 171 Questions 2 and 7 on page 171, Question 3 on page 178
3	Scientific notation and significant figures Questions 45 to 47 on page 5
4	Arcs and sectors of circles Examples on page 126 Questions 4 and 5 on page 126, Question 1 on page 131 Examples on page 127 Questions 4 and 5 on page 127, Question 2 on page 131
5	Volume of solids Question 74(a) and 75 on page 8
6	Expanding brackets Examples on page 14 Questions 2 and 3 on page 15
7	Changing the subject of a formula Examples on page 99 Questions 2 and 3 on page 99

Answers
1. $7a^9$
2. (a) $4\sqrt{11}$ (b) $\sqrt{100} = 10$
3. $7100000 = 7.1 \times 10^6$
4. (a) 5 cm (b) 22.6 cm^2
5. (a) $V = 1847 \text{ cm}^3$ (b) Cone is $\frac{1}{3}$ of a cylinder, $V = 615.8 \text{ cm}^3$
6. $2x^2 - 6x + 5x - 15 = 2x^2 - x - 15$
7. $a = \frac{T-7}{3}$