Unit 3 Variations

1	In an ratio $a:b$, a is called	Relation	✓Antecedent	Consequent	None of these
2	In ration $x:y$, y is called	Relation	Antecedent	✓Consequent	None of these
3	In proportion $a:b :: c:d$, a and d are called	Means	✓Extremes	Third proportion	None of these
4	In proportion $a:b :: c:d$, b and c are called	✓Means	Extremes	Fourth proportion	None of these
5	In continued proportion $a:b = b:c$, $ac = b^2$, b is said to be ____ proportional between a and c.	Third	Fourth	✓Means	None of these
6	In continued proportion $a:b = b:c$, c is said to be ____ proportional between a and b.	✓Third	Fourth	Mean	None of these
7	Find x in proportion $4:x :: 5:15$	✓12	$\frac{3}{4}$	$\frac{4}{3}$	$\frac{75}{4}$
8	If $u \propto v^2$, then	$u = v^2$	✓$u = kv^2$	$uv^2 = k$	$uv^2 = 1$
9	If $y^2 \propto \frac{1}{x^3}$, then	✓$y^2 = \frac{k}{x^3}$	$y^2 = \frac{1}{x^3}$	$y^2 = x^2$	$y^2 = kx^3$
10	If $\frac{u}{v} = \frac{v}{w} = k$, then	✓$u = wk^2$	$u = vk^2$	$u = w^2k$	$u = v^2k$
11	The third proportion of x^2 and y^2 is	$\frac{y^2}{x^2}$	x^2y^2	✓$\frac{y^4}{x^2}$	$\frac{y^2}{x^4}$
12	The fourth proportional w of $x:y :: v:w$ is	$\frac{xy}{v}$	✓$\frac{vy}{x}$	xyv	$\frac{x}{vy}$
13	If $a:b :: x:y$, then alternando property is	✓$\frac{a}{x} = \frac{b}{y}$	$\frac{a}{b} = \frac{x}{y}$	$\frac{a+b}{b} = \frac{x+y}{y}$	$\frac{a-b}{x} = \frac{x-y}{y}$
14	If $a:b :: x:y$, then invertendo property is	$\frac{a}{x} = \frac{b}{y}$	$\frac{a}{a-b} = \frac{x}{x-y}$	$\frac{a+b}{b} = \frac{x+y}{y}$	✓$\frac{b}{a} = \frac{y}{x}$
15	If $\frac{a}{b} = \frac{c}{d}$, then componendo property is	✓$\frac{a}{a+b} = \frac{c}{c+d}$	$\frac{a}{a-b} = \frac{c}{c-d}$	$\frac{ad}{bc}$	$\frac{a-b}{b} = \frac{c-d}{d}$