

Q1. (2017)

22	Alternative method 1	
	$d = kt^2$ or $45 = k \times 3^2$ or $45 \div 9$	M1 oe equation
	$d = 5t^2$ or $(k =) 5$	M1dep oe equation 245 implies M2
	their 5×10^2 or 500	M1dep oe M3 $\left(\frac{10}{3}\right)^2 \times 45$ oe
	455	A1
	Alternative method 2	
	$kd = t^2$ or $k \times 45 = 3^2$ or $9 \div 45$	M1 oe equation
	$0.2d = t^2$ or $(k =) 0.2$	M1dep oe equation 245 implies M2
	$10^2 \div$ their 0.2 or 500	M1dep oe M3 $45 \div \left(\frac{3}{10}\right)^2$ oe
	455	A1
	Additional Guidance	
	$d \propto t^2$ with no further valid working	Zero
	$d = kt$ or $d = kt^3$ or $d = \frac{k}{t^2}$ etc not recovered	Zero
	$45 : 9$ with no further valid working	Zero
	$d = 5t^2$ or $(k =) 5$ scores M2 even if not subsequently used	M2
	$d = kt^2$ or $45 = k \times 3^2$ or $45 \div 9$ scores M1 even if not subsequently used	M1
	$0.2d = t^2$ or $(k =) 0.2$ scores M2 even if not subsequently used	M2
	$kd = t^2$ or $k \times 45 = 3^2$ or $9 \div 45$ scores M1 even if not subsequently used	M1
	Allow use of other letters	

Q2. (2023)

Q	Answer	Mark	Comments
12	$8 \div 5$ or $19.2 \div 12$ or $\frac{8}{5}$ or $\frac{19.2}{12}$ or 1.6 or $12 \div 5$ or $19.2 \div 8$ or $\frac{12}{5}$ or $\frac{19.2}{8}$ or 2.4	M1	oe use of a valid pair of sides to make an appropriate calculation or value eg $5 \div 8$ or 0.625 or $5 \div 12$ or [0.416, 0.417]
	$8 \div 5 = 19.2 \div 12$ or $\frac{8}{5} = \frac{19.2}{12}$ or $12 \div 5 = 19.2 \div 8$ or $\frac{12}{5} = \frac{19.2}{8}$	A1	oe showing sides are in proportion eg $5 \div 8 = 12 \div 19.2$ or $\frac{5}{12} = \frac{8}{19.2}$
	Additional Guidance		
	For A1 equating may be implied by two calculations or two fractions with correct evaluation eg $8 \div 5 = 19.2 \div 12$ is implied by $8 = 5 \times 1.6$ and $19.2 = 12 \times 1.6$		M1A1
	For A1 equating may be implied by calculations eg1 $8 \div 5 = 19.2 \div 12$ is implied by $8 \div 5 = 1.6$ and $12 \times 1.6 = 19.2$		M1A1
	eg2 $8 \div 5 = 19.2 \div 12$ is implied by $\frac{8}{5} \times 12 = 19.2$		M1A1
	$5 \times 19.2 = 8 \times 12$		M1A1
	$5 \times 19.2 = 96$ and $8 \times 12 = 96$		M1A1
	Non-contradictory working can be ignored eg correct response along with area calculations		M1A1
	Ignore words eg references to scale factors, enlargement, angles		
	Working on diagrams may be seen eg1 Arrows or lines from 5 to 8 and 12 to 19.2 with $\times 1.6$ on them eg2 Arrows or lines from 5 to 8 and 12 to 19.2 with 1.6 on them Arrows or lines must unambiguously link relevant numbers		M1A1 M1A0
	For $8 \div 5$ or $\frac{8}{5}$ allow $8 : 5$ etc		