1			648	M2	a complete method, eg 12.5 × 1000 ÷ 19.3	
				[M1	for using volume = mass/density, eg 12500 ÷ 19.3 (condone inconsistent units or incorrect conversions) may be implied by digits 647... or 648...]	
				A1	for answer in range 647 to 648	

2	(a)		62	M1	for distance ÷ time eg 186 ÷ 3 or 186 ÷ (3× 60)(=1.03..)	May use hours or minutes at this point
				A1	cao	
	(b)		232	M1	for speed × time eg 58 × 4 or 58 × 4 × 60 (=13920)	May use hours or minutes at this point
				A1	cao	

3			No (supported)	P1	For a process to calculate the initial or new pressure, eg (70 +10) ÷ (20+10) (=2.6 to 2.7) **or** 80 ÷ 30 (=2.6 to 2.7) **or** 70 ÷ 20 (=3.5)	Accept any value in the range 2.6 to 2.7 if unsupported by working
				P1	For a complete process to make a comparison eg. 0.8 × "3.5" (=2.8) **OR** $\frac{("3.5"-"2.6")}{"3.5"}$ ×100 (=22 to 26) **OR** "3.5" × 0.2 (=0.7) **and** 80 ÷ 30 (=2.6 to 2.7) **OR** $\frac{"2.6"}{"3.5"}$ (× 100) (=0.74 to 0.78 or 74 to 78)	
				A1	for a correct conclusion supported by accurate figures eg 2.8 and 2.6(6...) **OR** decrease is 24% (or 22% to 26%) **OR** 0.7 **and** 2.6 to 2.7 **and** 3.5 **OR** 0.7 **and** 0.9 **OR** 0.76 (or 0.74 to 0.78) **OR** 76% (or 74% to 78%)	Allow truncation or rounding of figures

4	(a)		16 to 20	P1	for using time = $\frac{distance}{speed}$, eg $\frac{1}{200}$ or $\frac{1}{213}$ or for 1 hour = 60 × 60 (= 3600) seconds	
				P1	complete process, eg $\frac{1}{200}$ × 60 × 60 oe or $\frac{1}{213}$ × 60 × 60	Calculation could be done in stages.
				A1	for answer in range 16 to 20	
	(b)		decision with reason	C1	(dep on correct use of time = $\frac{distance}{speed}$) for reason related to their response to part(a), eg overestimate as speed rounded down	

5			50	B1	for finding the time difference, eg, 1hr 18 mins or 78 mins oe	Allow 1.18 for this mark 118 scores B0
				P1	for correct process to convert minutes to hours, eg 18 ÷ 60 (=0.3) or 78 ÷ 60 (=1.3) or for a correct process to convert speed in miles per minute to mph eg "0.833..." × 60	For a conversion of time or speed
				P1	for using speed = distance ÷ time eg, 65 ÷ [time] or 65 ÷ 78 (=0.833...)	[time] is what the candidate clearly indicates as time difference
				A1	cao SCB2 for 83(.333...) seen as the answer	

6			450	M1	for 18 ÷ 3(=6)	Ignore units
				M1	for substitution eg. 75 = $\frac{F}{"6"}$ or 75 × "6"	
				A1	cao	

7		2 hours 45 minutes		P1	for 30 ÷ 24 (= 1.25) or 12 ÷ 8 (= 1.5)	May be written in hours and/or minutes
				P1	for finding the sum of their two times eg "1.25" + "1.5" (= 2.75) or 165 (minutes)	or 3 h 15 min or 2 h 75 min
				A1	cao	

8	96	M1	for a complete process to find the volume eg $6 \times 4 \times 10 \div 2$ $(= 120)$	
		M1	for a complete process, eg $(6 \times 4 \times 10 \div 2 \ ) \times 0.8$	
		A1	cao SC B1 for 192	