Sharing in Ratios Past Paper Questions (MS)

Q1.

Question	Working	Answer	Mark	Notes
		135	M1	for $450 \div$ "2+3+5" (=45) **or** $\frac{3}{10} \times 450$ (=135) **or** 5 parts are 225 **or** 2 parts are 90 indicated
			A1	Cao

Q2.

Question	Working	Answer	Mark	Notes
		225	M1	for method to find weight of beans, e.g. $\frac{3}{2} \times 150$
			A1	cao

Q3.

Question	Answer	Mark	Mark scheme	Additional guidance
	1.75	P1	for an initial process eg $1.80 \div 12$ (=0.15) or $1.80 \div 3$ (=0.6)	Accept $1.8 \div 12 = 15$ (p) They can work in pounds or pence
		P1	for a correct second step eg "0.15" $\div 3$ (=0.05) or "0.6" $\times 7$ (=4.2) or $3 \div$ "0.15"(=20) or $7 \div 3$ (=2.3..) or "0.15" $\times 7$ (=1.05)	
		P1	for finding the price of one pen eg-"0.05" $\times 7$ (=0.35) or "4.2" $\div 12$ (=0.35) or $7 \div$ "20"(=0.35) or "2.3.... $\times$ "0.15" (=0.35) or "1.05" $\div 3$ (=0.35)	
		A1	cao	

Q4.

Question	Answer	Mark	Mark scheme	Additional guidance
	blue 0.15 green 0.2	P1	for 1 – 0.4 – 0.25 (=0.35) oe	May work in percentages, condone missing % sign If the two numbers in the table sum to 0.35 that implies P1
		P1	for using the ratio, eg "0.35" ÷ (3 + 4) (=0.05) **or** "0.35" × $\frac{3}{7}$ (=0.15) **or** "0.35" × $\frac{4}{7}$ (=0.2)	One correct value in the table implies P2 7 can come from 3+4
		P1	for a complete process 3 × "0.05" (=0.15) **and** 4 × "0.05" (=0.2) **or** "0.35" – "0.15" (=0.2) **or** "0.35" – "0.2" (=0.15) **or** green 0.15, blue 0.2	
		A1	oe	Accept answers given in decimals, fractions or percentages.

Q5.

Question	Answer	Mark	Mark scheme	Additional guidance
	$\frac{9}{25}$	M1	for $\frac{n}{6+9+10}$ where n is an integer < 25	
		A1	for $\frac{9}{25}$	Or equivalent fraction

Q6.

Question	Answer	Mark	Mark scheme	Additional guidance
	18	P1	for 240 ÷ 10 (= 24) **or** 240 ÷ 8 (= 30)	Accept 3 + 7 for 10, 3 + 5 for 8
		P1	for 3 × "24" (= 72) **or** 7 × "24" (= 168) **or** 3 × "30" (= 90) **or** 5 × "30" (= 150)	
		P1	for 3 × "24" (= 72) **and** 3 × "30" (= 90) **or** 7 × "24" (= 168) **and** 5 × "30" (= 150)	
		A1	cao	

Q7.

Question	Answer	Mark	Mark scheme	Additional guidance
	33	P1	for relating 24 to 8 parts, **or** (1 part =) 24 ÷ 8 (= 3) **or** 15 – 7 (= 8) **or** starts to use a build-up method, eg (8 :) 14 : 30	8 parts = 24
		P1	for (15 – 4) **and** (24 ÷ 8) **or** 15 × 3 (= 45) **and** 4 × 3 (= 12) **or** for 12 (: 21) : 45	
		A1	cao	

Q8.

Question	Answer	Mark	Mark scheme	Additional guidance
	Description	C1	Identifies a mistake in the working **Acceptable examples** Rob should divide by 8 He should have added the 3 and 5 first He divided 120 by 3 and 5 instead of 8 He did not do it as $120 \times \frac{3}{8}$ and $120 \times \frac{5}{8}$ He did not add the two ratios first **Not acceptable examples** He has done it in two parts but he should do it in one The answer should be 45 : 75 They do not add up to 120 He is supposed to add his numbers 40 + 24 does not equal 120	

Q9.

Question	Answer	Mark	Mark scheme	Additional guidance
	168	P1	for working with ratio to find the amount for C or D eg. 1.5 × 2 (=3) or (A, B, C, D =) 2 , 7 , 3 , 3 oe **OR** for suitable expressions linking A with C or D, eg. A = x, C = 1.5x	
		P1	for "2 + 3 + 3 + 7" (=15) **OR** adds 4 suitable expressions, eg. "x + 3.5x + 1.5x + 1.5x" (= 7.5x)	
		P1	for a complete process to find the amount of money eg. 360 ÷ "15"× 7 **OR** 360 ÷ "7.5" × 3.5	
		A1	cao	

Q10.

Question		Working	Answer	Mark	Notes
		60 ÷ 12 = 5 2×5=10; 3×5=15; 7×5=35	10 15 35	3	M1 for 60 ÷ (2+3+7) or ×5 or multiple build-up (at least 4 correct) eg 2:3:7, 4:6:14 ,6:12:28, 8:12:28 M1 for 60÷(2+3+7) ×2 or 60÷(2+3+7) ×3 or 60÷(2+3+7) ×7 or sight of the numbers 10,15,35 together or 2×5 or 3×5 or 7×5 A1 cao SC: B1 for 2 correct numbers out of 3 in a ratio

Q11.

Question	Working	Answer	Mark	Notes
	300 ÷ (2 + 3 + 5) × 5 = 300 ÷ 10 × 5 =	150	2	M1 for 300 ÷ (2 + 3 + 5) or 300 ×5 or 30 seen or 60:90:150 A1 cao

Q12.

Question	Working	Answer	Notes
		700	P1 for process for total non-fiction books eg $\frac{1}{4} \times 80$ (=20) P1 process for total takings for non fiction eg $20 \times \frac{1}{2} \times 10$ (= 100) P1 process to find total takings "100" + 60 × 10 A1 700