

FRACTIONS

Pearson Edexcel - Tuesday 19 May 2020 - Paper 1 (Non-Calculator) Foundation Tier

1.

21	Shown	M1	for conversion to improper fractions eg. $\frac{7}{3}$ or $\frac{15}{4}$	Need not be shown with operators
		M1	(dep) for method to multiply fractions, eg. $\frac{7 \times 15}{3 \times 4} (= \frac{105}{12})$ or $\frac{28 \times 45}{12 \times 12} (= \frac{1260}{144})$ oe	
		C1	for complete working showing each stage as far as $\frac{35}{4}$ or $8\frac{9}{12}$	

Pearson Edexcel - Tuesday 21 May 2019 - Paper 1 (Non-Calculator) Foundation Tier

2.

19	(a)	$\frac{7}{15}$	M1	for suitable common denominator with at least one fraction out of two correct, eg $\frac{10}{15} - \frac{3}{15}$ oe	
			A1	oe	
	(b)	$\frac{1}{2}$	M1	for method to multiply fractions, eg $\frac{2 \times 3}{3 \times 4}$, $\frac{8 \times 9}{12 \times 12}$ or to simplify, $\frac{1}{3} \times \frac{3}{2}$ or $\frac{2}{1} \times \frac{1}{4}$ OR for an answer equivalent to $\frac{1}{2}$ (unsimplified) eg $\frac{2}{4}$, 0.5	
			A1	cao	

Pearson Edexcel - Tuesday 6 November 2018 - Paper 1 (Non-Calculator) Foundation Tier

3.

11	(a)	$\frac{10}{16}$	B1	cao	Accept any equivalent fraction
	(b)	$\frac{11}{12}$	M1	for $\frac{10}{12}$ OR for using a suitable common denominator other than 12 with at least one of the two fractions correct, eg $\frac{2}{24} + \frac{20}{24}$	
			A1	for $\frac{11}{12}$ oe	

Pearson Edexcel - Thursday 24 May 2018 - Paper 1 (Non-Calculator) Foundation Tier

4.

19	(a)	$\frac{95}{28}$	M1	for a method to add using common denominators with at least one fraction correct (matching numerator with common denominator) eg $\frac{60}{28} + \frac{35}{28}$ or $(2)\frac{4}{28} + (1)\frac{7}{28}$	Use of decimals gets no credit unless it leads to a correct fraction
			A1	$\frac{95}{28}$ oe $3\frac{11}{28}$	
	(b)	$1\frac{3}{5}$	M1	for $\frac{6}{5} \times \frac{4}{3}$ or $\frac{24}{20} \div \frac{15}{20}$ or $\frac{8}{5}$ oe $1\frac{9}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
			A1	cao	

Pearson Edexcel - Thursday 2 November 2017 - Paper 1 (Non-Calculator) Foundation Tier

5.

14		$\frac{5}{7}$	P1	for $\frac{7}{5} = 1.4$ or $\frac{5}{7} = 0.7$.. or compares $\frac{1}{7}$ to $\frac{1}{5}$ or compare $\frac{5}{7}$ to 1 eg $1 - \frac{5}{7} (= \frac{2}{7})$ or compare $\frac{7}{5}$ to 1 eg $\frac{7}{5} = 1\frac{2}{5}$ or eg $\frac{49}{35}$ or $\frac{14}{35}$ or $\frac{25}{35}$ oe	
			supported	P1	for $\frac{7}{5} = 1.4$ and $\frac{5}{7} = 0.7$.. or compares $\frac{5}{7}$ to 1 eg $1 - \frac{5}{7} (= \frac{2}{7})$ and $\frac{7}{5}$ to 1 eg $\frac{7}{5} = 1\frac{2}{5}$ or two correct fractions with common denominator eg $\frac{49}{35}$ and $\frac{25}{35}$
				C1	for $\frac{5}{7}$ with supporting evidence

Pearson Edexcel - Thursday 2 November 2017 - Paper 1 (Non-Calculator) Foundation Tier

6.

22	(a)	$\frac{8}{20} + \frac{5}{20}$	$\frac{13}{20}$	M1	for suitable common denominator with one fraction out of two correct or $0.4 + 0.25$
				A1	for $\frac{13}{20}$ or 0.65 oe
	(b)		$\frac{1}{8}$	B1	Accept 0.125

Pearson Edexcel – Specimen 1 - Paper 2 (Calculator) Foundation Tier

7.

19	(a)			C1	for a correct evaluation of the method shown by giving at least one correct error made, eg "didn't multiply the 1 by 5"
	(b)			C1	for a correct evaluation of the method shown by giving at least one correct error made, eg "can't split a mixed number" or "should convert to improper (oe) fractions first"

Pearson Edexcel – Specimen 1 - Paper 3 (Calculator) Foundation Tier

8.

2		5.25	B1 cao
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Pearson Edexcel – Sample Paper 1 (Non-Calculator) Foundation Tier

9.

16		loss (supported by correct figures)	<p>P1 process to find total spent eg. $20 \times 7 (=140)$</p> <p>P1 complete process to find profit from full price oranges eg. $\frac{2}{5} \times 25 \times 20 \times 40 (= 8000)$</p> <p>P1 complete process to find profit from reduced price oranges eg. $50 \times \left(\frac{3}{5} \times 25 \times 20\right) \div 3 (=5000)$</p> <p>P1 complete process to find total income with consistent units</p> <p>A1 loss with £10 or -£10 or £130 and £140</p>
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Pearson Edexcel – Sample Paper 1 (Non-Calculator) Foundation Tier

10.

18	(a)		$\frac{17}{35}$	<p>M1 for common denominators with at least one numerator correct</p> <p>A1</p>
	(b)		$\frac{20}{9}$	<p>M1 for $\frac{5}{3} \times \frac{4}{3}$ or $\frac{20}{12} + \frac{9}{12}$</p> <p>A1</p>

OCR Thursday 6 June 2019 – Morning (Non-Calculator) Foundation Tier

11.

3	(a)	(i)	12	1		
		(ii)	9	1		
	(b)		$\frac{7}{15}$ oe	2	M1 for $\frac{10k}{15k}$ or $\frac{3k}{15k}$ seen where k is a positive integer	May be seen as part of a single fraction eg $\frac{10-3}{15}$

OCR Monday 12 November 2018 – Morning (Calculator) Foundation Tier

12.

9	(a)		[LE BP] LE TL LE BM BP TL BP BM TL BM	2	B1 for 5 of <i>their</i> entries correct and no more than one extra or repeat or 4 correct only	Places may be reversed such as TL BP within 6 combinations
	(b)		$\frac{\text{their LE}}{\text{their total}}$	1 FT	Strict FT from <i>their</i> table with a minimum of three additional entries	Accept decimal and percentage equivalents only. ISW attempts to cancel or convert form Total (number of rows) must include given row

OCR Thursday 7 June 2018 – Morning (Non Calculator) Foundation Tier

13.

13	a		$1\frac{9}{40}$	3	Mark final answer M2 for $\frac{24[k] + 25[k]}{40[k]}$ or better (k is positive integer) or M1 for two equivalent fractions with common denominator of $40[k]$ attempted with one numerator correct If 0 scored, SC1 for answer 1.225	Could be separate fractions M2 soi by $\frac{49[k]}{40[k]}$ oe Could be seen in 2 different fractions without addition
	b		4.84×10^4	3	M2 for figs 484 in final answer or B1 for 50 000 or 50×10^3 seen or for 1600 or 0.16×10^4 seen	Allow M2 if correct answer oe seen in working

OCR Tuesday 12 June 2018– Morning (Calculator) Foundation Tier

14.

3	(a)		4	1		
	(b)		42.9 cao	2	B1 for 42.8 or 42.87[5] or 42.88 or 43 seen	

15.

19			$\frac{300 \times (7-3)}{60} = 20$ AND it is close to 19.5 oe or 19.5 rounds to 20 oe or [Asha's estimate] is reasonable	3	B2 for 300, 7, 3 and 60 seen or B1 for two of 300, 7, 3 and 60 seen or 300, 4 and 60 seen or 300.0, 7.0, 3.0. 60.0 AND B1dep for result 20 and correct conclusion following B1 or B2	Actual answer 19.475959...(may be rounded) scores 0 Accept "Yes" or "She's right" or "It is" or equivalent comment
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OCR Wednesday 8 November 2017– Morning (Calculator) Foundation Tier

16.

2	(a)		$\frac{3}{7}$ oe	1	Accept equivalent eg $\frac{6}{14}$, $\frac{21}{49}$ or 0.428 to 0.429 or 42.8% to 42.9%	
	(b)		5, 6 and 7 cao	2	B1 for $\frac{4}{16}$ or $\frac{8}{16}$ seen or At least one from 5, 6 or 7 (condone 4 and/or 8 included)	Allow $\frac{5}{16}$, $\frac{6}{16}$, $\frac{7}{16}$ for B1

OCR Thursday 8 June 2017 – Morning (Non - Calculator) Foundation Tier

17.

2	a	i	$7\frac{1}{4}$ oe	1		Accept eg $\frac{58}{8}$ ISW Do not accept eg $6\frac{5}{4}$
		ii	36	2	M1 for $63 \div 7$ soi	Implied by $[\frac{1}{7} \text{ of } 63] = 9$ $\frac{63}{7}$ not enough for M1 without 9 or division sign or bus stop eg $7 \overline{)63}$

	b		$[\frac{4}{5} =] \frac{36}{45}$ and $[\frac{7}{9} =] \frac{35}{45}$ oe or $[\frac{4}{5} =] 0.8$ and $[\frac{7}{9} =] 0.77\dots$ or 0.78	2	M1 for correct equivalent fraction or decimal to $\frac{4}{5}$ or $\frac{7}{9}$ ISW Or M1 for finding $\frac{4}{5}$ and $\frac{7}{9}$ of a common multiple of 5 and 9	Accept any valid complete comparison Condone equivalent percentage. Accept $0.\dot{7}$
	c		Any fraction n st $0.2 < n < 0.25$ such as $\frac{9}{40}$	2	M1 for either a fraction equivalent to 0.2 and a fraction equivalent to 0.25 seen , where the denominators or the numerators are the same e.g. $\frac{8}{40}$ and $\frac{10}{40}$ seen or $[\frac{1}{5} =] 0.2$ and $[\frac{1}{4} =] 0.25$ seen or n st $0.2 < n < 0.25$ where n not a fraction	Accept equivalent percentages Eg $\frac{4.5}{20}$

OCR Thursday 8 June 2017 – Morning (Non - Calculator) Foundation Tier

18.

14			$\frac{1}{11}$ final answer	2	M1 for $\frac{30}{330}$ oe or correct cancelling shown After 0 scored, SC1 for their fraction written in simplest form	For M1, condone 1 correct stage of cancelling common factors in numerators and denominators SC1 dep on a fraction that reduces
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AQA Wednesday 8 November 2017 – Morning (Calculator) Foundation Tier

19.

Alternative method 1 of 6			
16	$64 \times \frac{3}{8}$ or 24 or $78 \times \frac{7}{13}$ or 42 or $6 \times 78 \times \frac{7}{13}$ or 252	M1	oe $64 \times \frac{5}{8}$ or 40 or $78 \times \frac{6}{13}$ or 36 or $6 \times 78 \times \frac{6}{13}$ or 216
	$64 \times \frac{3}{8} + 6 \times 78 \times \frac{7}{13}$ or their 24 + their 252 or 276	M1dep	oe $64 \times \frac{5}{8} + 6 \times 78 \times \frac{6}{13}$ or their 40 + their 216 or 256
	$64 + 6 \times 78$ or $64 + 468$ or 532	M1	
	their $532 \div 2$ or 266	M1dep	dep on 3 rd method mark only
	266 and 276 and Yes or 266 and 256 and Yes	A1	

Alternative method 2 continues on the next page

Alternative method 2 of 6			
16 cont	$64 \times \frac{3}{8}$ or 24 or $78 \times \frac{7}{13}$ or 42 or $6 \times 78 \times \frac{7}{13}$ or 252	M1	oe $64 \times \frac{5}{8}$ or 40 or $78 \times \frac{6}{13}$ or 36 or $6 \times 78 \times \frac{6}{13}$ or 216
	$64 \times \frac{3}{8} + 6 \times 78 \times \frac{7}{13}$ or their 24 + their 252 or 276	M1dep	oe $64 \times \frac{5}{8} + 6 \times 78 \times \frac{6}{13}$ or their 40 + their 216 or 256
	$64 + 6 \times 78$ or $64 + 468$ or 532	M1	
	their 532 – their 276	M1dep	dep on M1M1M1 their 532 – their 256
	256 and 276 and Yes	A1	

Alternative method 3 continues on the next page

Alternative method 3 of 6			
16 cont	$64 \times \frac{3}{8}$ or 24 or $78 \times \frac{7}{13}$ or 42 or $6 \times 78 \times \frac{7}{13}$ or 252	M1	oe $64 \times \frac{5}{8}$ or 40 or $78 \times \frac{6}{13}$ or 36 or $6 \times 78 \times \frac{6}{13}$ or 216
	$64 \times \frac{3}{8} + 6 \times 78 \times \frac{7}{13}$ or their 24 + their 252 or 276	M1dep	oe $64 \times \frac{5}{8} + 6 \times 78 \times \frac{6}{13}$ or their 40 + their 216 or 256
	$64 \div 2$ or 32 and $(6 \times 78) \div 2$ or $468 \div 2$ or 234	M1	
	their 32 + their 234 or 266	M1dep	dep on 3 rd method mark only
	266 and 276 and Yes or 266 and 256 and Yes	A1	

Alternative method 4 continues on the next page

Alternative method 4 of 6			
16 cont	$64 \times \frac{3}{8}$ or 24 or $78 \times \frac{7}{13}$ or 42 or $6 \times 78 \times \frac{7}{13}$ or 252	M1	oe
	$64 \times \frac{3}{8} + 6 \times 78 \times \frac{7}{13}$ or their 24 + their 252 or 276	M1dep	oe
	$64 + 6 \times 78$ or $64 + 468$ or 532	M1	
	their $276 \div$ their 532 or 0.51... or 0.52 or their $532 \div$ their 276 or 1.9... or 1.93	M1dep	oe dep on M1M1M1
	532 and 276 and 0.51... or 0.52 and Yes or 532 and 276 and 1.9... or 1.93 and Yes	A1	

Alternative method 5 continues on the next page

Alternative method 5 of 6			
16 cont	$64 \times \frac{3}{8}$ or 24 or $78 \times \frac{7}{13}$ or 42 or $6 \times 78 \times \frac{7}{13}$ or 252	M1	oe $64 \times \frac{5}{8}$ or 40 or $78 \times \frac{6}{13}$ or 36 or $6 \times 78 \times \frac{6}{13}$ or 216
	$64 \times \frac{3}{8} + 6 \times 78 \times \frac{7}{13}$ or their 24 + their 252 or 276	M1dep	oe $64 \times \frac{5}{8} + 6 \times 78 \times \frac{6}{13}$ or their 40 + their 216 or 256
	their 276 \times 2 or 552	M1dep	their 256 \times 2 or 512
	$64 + 6 \times 78$ or $64 + 468$ or 532	M1	
	532 and 552 and Yes or 532 and 512 and Yes	A1	

Alternative method 6 continues on the next page

16 cont	Alternative method 6 of 6		
	$\frac{1}{2} - \frac{3}{8}$ or $\frac{1}{8}$ or $\frac{7}{13} - \frac{1}{2}$ or $\frac{1}{26}$	M1	oe
	64 × their $\frac{1}{8}$ or 8 (under) or 78 × their $\frac{1}{26}$ or 3 (over)	M1dep	oe
	78 × their $\frac{1}{26} \times 6$ or 18 (over)	M1dep	oe
	64 × their $\frac{1}{8}$ or 8 (under) and 78 × their $\frac{1}{26} \times 6$ or 18 (over)	M1dep	oe May be subtracted
	8 under (half) and 18 over (half) and Yes or 10 over (half) and Yes	A1	
	Additional Guidance		
	Condone $\frac{24}{64}$ for 24 or $\frac{42}{468}$ for 42 or $\frac{252}{468}$ for 252 for first method mark		
	276 and 10 over (266) and Yes implies 266 and 276 and Yes		M1M1M1M1A1
	In Alt 2 256 and 276 and Yes		M1M1M1M1A1
In Alt 4 accept working with unused seats leading to their 256 ÷ their 532 or 0.4... or 0.49 or their 532 ÷ their 256 or 2.07... or 2.08			

AQA Sample Paper 1– Morning (Non-Calculator) Foundation Tier

20.

9	$\frac{180}{3000}$ or $\frac{18}{300}$ or 1kg = 1000g seen or implied	B1	oe fraction eg 3000 or 0.18 seen
	$\frac{3}{50}$	B1ft	

AQA Sample Paper 2– Morning (Calculator) Foundation Tier

21.

24	$\frac{4}{5}$ or 80% seen or used	M1	oe May be implied
	29.4(0) \times 5 \div 4 or 147 \div 4 or 29.4(0) \div 4 (\times 5) or 7.35 (\times 5) or 29.4(0) \div 0.8	M1	oe
	36.75	A1	