

4 6 heptagons, 7 octagons

5 12 heptagons, 2 octagons

4 heptagons, 9 octagons

C

1 (a) 24 (b) 40 (c) 60 (d) 180

2 $j = 2(v^2 - v)$ or $2v^2 - 2v$, $(v^2 - v) \times 2$, etc

3 9 lollies, 13 ices 22 lollies, 4 ices

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1 $4\frac{1}{2}$ 2 $2\frac{2}{5}$ 3 $3\frac{1}{3}$ 4 $\frac{5}{6}$ 5 $\frac{2}{3}$ 6 $\frac{3}{4}$
 7 $\frac{1}{3}$ 8 $\frac{3}{12}$ 9 $\frac{9}{12}$ 10 $\frac{4}{8}$ 11 $\frac{4}{6}$

B

1 $4\frac{1}{3}$ 2 $2\frac{2}{3}$ 3 $3\frac{3}{4}$ 4 $2\frac{5}{6}$ 5 $2\frac{1}{2}$ 6 $8\frac{1}{3}$
 7 $3\frac{1}{3}$ 8 $12\frac{1}{2}$ 9 $2\frac{1}{2}$ 10 $1\frac{3}{4}$ 11 $4\frac{5}{6}$ 12 $3\frac{2}{3}$
 13 $\frac{1}{3}$ 14 $\frac{1}{4}$ 15 $\frac{2}{3}$ 16 $\frac{2}{5}$ 17 $\frac{3}{5}$ 18 $\frac{2}{5}$
 19 $\frac{3}{10}$ 20 $\frac{1}{2}$ 21 $\frac{1}{3}$ 22 $\frac{4}{5}$ 23 $\frac{5}{6}$ 24 $\frac{3}{4}$
 25 $\frac{1}{4}$ 26 $\frac{3}{4}$ 27 $\frac{3}{5}$ 28 $\frac{2}{3}$

C

1 $6\frac{1}{4}$ 2 $5\frac{5}{7}$ 3 $4\frac{4}{9}$ 4 $6\frac{1}{4}$ 5 350g 6 1 m 80 cm
 7 £1.65 8 £9.75 9 $1\frac{1}{4}$ 10 $1\frac{7}{8}$ 11 $2\frac{1}{2}$ 12 $3\frac{1}{8}$
 13 $\frac{5}{7}$ 14 $\frac{9}{10}$ 15 $\frac{5}{8}$ 16 $\frac{9}{25}$ 17 $\frac{7}{10}$ 18 $\frac{3}{4}$
 19 $\frac{7}{20}$ 20 $\frac{4}{5}$ 21 $\frac{1}{3}$ 22 $\frac{17}{20}$ 23 $\frac{3}{10}$ 24 $\frac{3}{4}$
 25 $\frac{4}{7}$ 26 $\frac{4}{5}$ 27 $\frac{6}{7}$ 28 $\frac{5}{8}$

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1 (a) $\frac{50}{100}$, $\frac{8}{16}$ (b) $\frac{1}{6}$, $\frac{3}{8}$, $\frac{5}{9}$, $\frac{20}{12}$, $\frac{50}{50}$ (c) $\frac{6}{10}$, $\frac{3}{5}$, $\frac{11}{20}$
 2 > 3 < 4 < 5 > 6 < 7 >
 8 < 9 > 10 $\frac{9}{15}$, $\frac{5}{8}$, $\frac{16}{25}$, $\frac{13}{20}$

B

1 $\frac{2}{12}$, $\frac{1}{4}$, $\frac{1}{3}$ 2 $\frac{4}{10}$, $\frac{1}{2}$, $\frac{11}{20}$ 3 $\frac{2}{3}$, $\frac{11}{15}$, $\frac{4}{5}$ 4 $\frac{1}{2}$, $\frac{4}{6}$, $\frac{9}{12}$
 5 $\frac{1}{5}$, $\frac{3}{10}$, $\frac{1}{2}$ 6 $\frac{3}{20}$, $\frac{1}{4}$, $\frac{5}{5}$ 7 e.g. $\frac{3}{14}$ 8 e.g. $\frac{7}{12}$
 9 e.g. $\frac{11}{16}$ 10 e.g. $\frac{7}{20}$ 11 e.g. $\frac{19}{24}$ 12 e.g. $\frac{9}{10}$
 13 $\frac{5}{9}$, $\frac{4}{7}$, $\frac{2}{3}$ 14 $\frac{9}{11}$, $\frac{5}{6}$, $\frac{13}{15}$ 15 $\frac{3}{8}$, $\frac{7}{18}$, $\frac{5}{12}$ 16 $\frac{9}{24}$, $\frac{3}{7}$, $\frac{6}{13}$

C

1 $\frac{4}{12}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{3}{4}$ 2 $\frac{1}{4}$, $\frac{3}{10}$, $\frac{3}{8}$, $\frac{2}{5}$ 3 $\frac{2}{5}$, $\frac{1}{2}$, $\frac{6}{10}$, $\frac{3}{4}$ 4 $\frac{1}{6}$, $\frac{2}{9}$, $\frac{1}{4}$, $\frac{1}{3}$
 5 $\frac{4}{9}$, $\frac{1}{2}$, $\frac{2}{3}$, $\frac{5}{6}$ 6 $\frac{3}{6}$, $\frac{5}{8}$, $\frac{2}{3}$, $\frac{3}{4}$ 7 $\frac{9}{20}$ 8 $\frac{5}{9}$
 9 $\frac{3}{8}$ 10 $\frac{3}{4}$ 11 $\frac{1}{3}$ 12 $\frac{7}{24}$
 13 $\frac{5}{7}$, $\frac{8}{11}$, $\frac{7}{9}$, $\frac{5}{6}$ 14 $\frac{5}{9}$, $\frac{5}{8}$, $\frac{9}{14}$, $\frac{2}{3}$ 15 $\frac{2}{7}$, $\frac{4}{13}$, $\frac{5}{16}$, $\frac{3}{8}$ 16 $\frac{2}{9}$, $\frac{1}{4}$, $\frac{7}{25}$, $\frac{4}{11}$

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1 (a) 125g rice (b) 500g rice
 1 egg 4 eggs
 3 spring onions 12 spring onions
 2 mushrooms 8 mushrooms
 2 (a) 15 (b) 27 3 (a) 16 (b) 24 4 12

B

1 (a) 120 g cheese (b) 400 g cheese
 150 g macaroni 500 g macaroni
 45 g flour 150 g flour
 30 g butter 100 g butter
 375 ml milk 1250 ml milk
 2 30 minutes 3 80 cm 4 48 5 20

C

1 (a) 375 g flour (b) 200 g flour
 30 g sugar 16 g sugar
 90 g cheese 48 g cheese
 300 ml milk 160 ml milk
 2 64 cm, 96 cm 3 75 4 36

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1 (a) $\frac{1}{2}$ (b) 0.5 (c) 50% 2 (a) $\frac{35}{100}$ (b) 0.35 (c) 35%
 3 (a) $\frac{1}{4}$ (b) 0.25 (c) 25% 4 (a) $\frac{67}{100}$ (b) 0.67 (c) 67%
 5 (a) $\frac{3}{10}$ (b) 0.3 (c) 30% 6 (a) $\frac{3}{5}$ (b) 0.6 (c) 60%
 7 (a) $\frac{4}{100}$ (b) 0.04 (c) 4% 8 (a) $\frac{9}{10}$ (b) 0.9 (c) 90%
 9 (a) $\frac{19}{100}$ (b) 0.19 (c) 19% 10 (a) $\frac{3}{4}$ (b) 0.75 (c) 75%
 11 (a) 50% (b) 25% (c) 15% 12 10%

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1	Fractions	Decimals	%ages
	$\frac{3}{10}$	0.3	30%
	$\frac{46}{100}$	0.46	46%
	$\frac{1}{4}$	0.25	25%
	$\frac{7}{10}$	0.7	70%
	$\frac{9}{100}$	0.09	9%
	$\frac{6}{10}$	0.6	60%
	$\frac{1}{2}$	0.5	50%
	$\frac{83}{100}$	0.83	83%
	$\frac{3}{100}$	0.03	3%
	$\frac{11}{50}$	0.22	22%
	$\frac{7}{20}$	0.35	35%
	$\frac{3}{25}$	0.12	12%

2 76% 3 40% 4 70% 5 50% 6 48% 7 2%
 8 80% 9 75% 10 55%

C

1 (a) 0.9 (b) 90% 2 (a) 0.46 (b) 46%
 3 (a) 0.6 (b) 60% 4 (a) 0.78 (b) 78%
 5 (a) 0.28 (b) 28% 6 (a) 0.99 (b) 99%
 7 (a) 0.45 (b) 45% 8 (a) 0.47 (b) 47%
 9 (a) $\frac{31}{50}$ (b) 0.62 10 (a) $\frac{3}{10}$ (b) 0.3
 11 (a) $\frac{3}{20}$ (b) 0.15 12 (a) $\frac{43}{100}$ (b) 0.43
 13 (a) $\frac{16}{25}$ (b) 0.64 14 (a) $\frac{4}{5}$ (b) 0.8
 15 (a) $\frac{1}{8}$ (b) 0.125 16 (a) $\frac{1}{40}$ (b) 0.025