Name:

Exam Style Questions

Multiplying Fractions
Dividing Fractions

Corbettmαths

Equipment needed: Pen, calculator

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorials

Multiplying Fractions

Dividing Fractions

Answers and Video Solutions

1. Work out

$$\frac{1}{2} \times \frac{3}{5} = \frac{3}{10}$$

$\frac{3}{10}$

(1)

2. Work out

$$\frac{7}{8} \times \frac{3}{4} = \frac{21}{32}$$

$\frac{21}{32}$

(1)

3. Work out

$$\frac{4}{5} \times \frac{9}{10} = \frac{36}{50} = \frac{18}{25}$$

Give your answer as a fraction in its simplest form.

or $\frac{2}{\cancel{4}_{5}} \times \frac{9}{\cancel{10}_{5}} = \frac{18}{25}$

$\frac{18}{25}$

(2)

4. Work out

$$\frac{2}{3} \div \frac{8}{11} \qquad \frac{2}{3} \times \frac{11}{8} = \frac{22}{24} = \frac{11}{12}$$

Give your answer as a fraction in its simplest form.

or $\frac{1}{\cancel{2}_{3}} \times \frac{11}{\cancel{8}_{4}} = \frac{11}{12}$

$\frac{11}{12}$

(2)

5. Work out

$\frac{1}{4} \div \frac{6}{7}$

$\frac{1}{4} \times \frac{7}{6} = \frac{7}{24}$

$\frac{7}{24}$

.....

(1)

6. Work out

$\frac{5}{13} \div \frac{2}{3}$

$\frac{5}{13} \times \frac{3}{2} = \frac{15}{26}$

$\frac{15}{26}$

.....

(1)

7. Work out

$\frac{2}{17} \div \frac{2}{5}$

Give your answer as a fraction in its simplest form.

$\frac{2}{17} \times \frac{5}{2} = \frac{10}{34}$

$\frac{5}{17}$

.....

(2)

8. Work out

$\frac{5}{14} \times \frac{3}{4} = \frac{15}{56}$

$14 \times 4 = 56$

$\frac{15}{56}$

.....

(1)

9. Work out

$\frac{2}{3} \times 18$

$\frac{2}{3} \times \frac{18}{1} = \frac{36}{3} = 12$

or

$\frac{2}{3}$ of 18

$18 \div 3 = 6$

$6 \times 2 = 12$

12

.....

(1)

10. Work out

$5 \div \frac{3}{4}$

Give your answer as a mixed number.

$\frac{5}{1} \times \frac{4}{3} = \frac{20}{3}$

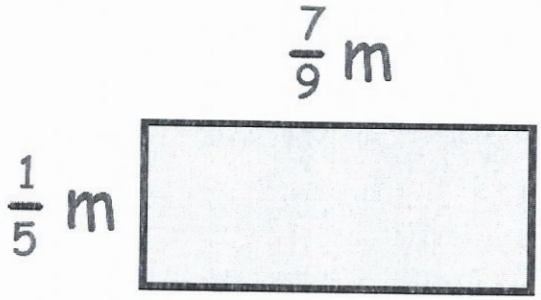
$6\frac{2}{3}$

$6\frac{2}{3}$

.....

(2)

11. Calculate the area of the rectangle



Include suitable units.

$\frac{1}{5} \times \frac{7}{9} = \frac{7}{45}$

$\frac{7}{45}$ m^2

.....

(2)

12. Work out

$$1\frac{1}{3} \times 2\frac{2}{5}$$

Give your answer as a mixed number.

$\frac{4}{3} \times \frac{12}{5} = \frac{48}{15}$

$= \frac{16}{5}$

$3\frac{1}{5}$

.....

(3)

13. Work out

$$1\frac{4}{7} \div 1\frac{1}{4}$$

Give your answer as a mixed number.

$\frac{11}{7} \div \frac{5}{4}$

$\frac{11}{7} \times \frac{4}{5} = \frac{44}{35}$

$1\frac{9}{35}$

.....

(3)

14. Work out

$$5\frac{1}{2} \times 1\frac{2}{3}$$

Give your answer as a mixed number.

$\frac{11}{2} \times \frac{5}{3} = \frac{55}{6}$

$9\frac{1}{6}$

.....

(3)

15. Work out

$$\frac{5}{6} \div 3$$

$\frac{5}{6} \div \frac{3}{1}$

$\frac{5}{6} \times \frac{1}{3} = \frac{5}{18}$

$\frac{5}{18}$

.....

(2)

16. Aled feeds his pet cat $\frac{3}{5}$ of a can of cat food each day.

How many cans of cat food should Aled buy each week?

$\frac{3}{5} \times \frac{7}{1} = \frac{21}{5}$

$= 4\frac{1}{5}$

5 cans

(3)

17. The next term of a sequence is found by multiplying the previous term by $\frac{2}{3}$

The first term in the sequence is $\frac{1}{5}$

Find the third term in the sequence.

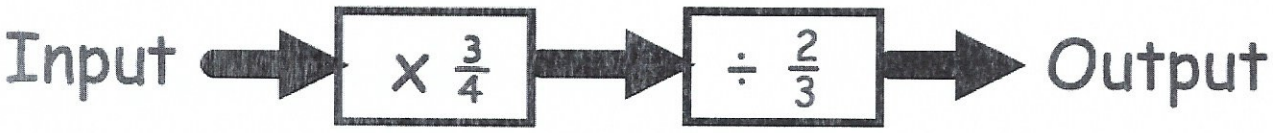
$\frac{1}{5} \times \frac{2}{3} = \frac{2}{15}$

$\frac{2}{15} \times \frac{2}{3} = \frac{4}{45}$

$\frac{4}{45}$

(3)

18.



(a) Find the output, if the input is 2.

$\frac{2}{1} \times \frac{3}{4} = \frac{6}{4}$

$= \frac{3}{2}$

$\frac{3}{2} \div \frac{2}{3}$

$\frac{3}{2} \times \frac{3}{2} = \frac{9}{4}$

$\frac{9}{4}$ or $2\frac{1}{4}$

(3)

(b) Find the input, if the output is $\frac{1}{2}$

$\frac{1}{2} \times \frac{2}{3} = \frac{2}{6} = \frac{1}{3}$

$\frac{1}{3} \div \frac{3}{4} =$

$\frac{1}{3} \times \frac{4}{3} = \frac{4}{9}$

$\frac{4}{9}$

(3)

19. Work out $\frac{2}{9} + \frac{1}{2} \div \frac{4}{5}$

$\frac{1}{2} \div \frac{4}{5}$

$\frac{1}{2} \times \frac{5}{4} = \frac{5}{8}$

$\frac{2}{9} + \frac{5}{8}$

$\frac{16}{72} + \frac{45}{72} = \frac{61}{72}$

$\frac{61}{72}$

.....

(4)

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20. Finn spends $\frac{1}{8}$ of his savings on a holiday.

Finn then spends $\frac{2}{3}$ of his remaining savings on a car.

What fraction of his savings does Finn have left?

To demonstrate.

let Finn have £2400

spends $\frac{1}{8}$ (£300).

leaves £2100

spends ($\frac{2}{3}$) £1400

leaves £700

$\frac{700}{2400} = \frac{7}{24}$

$\frac{7}{8}$ left after holiday

$\frac{7}{8} \times \frac{1}{3} = \frac{7}{24}$

$\frac{7}{24}$

.....

(3)

21. Mrs Holland wants to paint a wall.

The wall measures $6\frac{2}{3}$ metres by $3\frac{1}{7}$ metres

Each can of paint covers $5m^2$
Each can costs £7.50

How much will it cost Mrs Holland to paint her garage wall?

$\frac{20}{3} \times \frac{22}{7} = \frac{440}{21}$

$= 20\frac{20}{21}$

$\therefore$ 5 cans needed.

$5 \times £7.50 = £37.50$

£ 37.50

(5)

22. The numbers in each row, column and diagonal have a product of 8

A 10	B $\frac{1}{5}$	C 4
D $\frac{4}{5}$	E 2	F 5
G 1	H 20	I $\frac{2}{5}$

Find the missing numbers.

$2 \times \frac{1}{5} \times \boxed{H} = 8$

$\frac{2}{5} \times \boxed{H} = 8$

$8 \div \frac{2}{5}$

$\frac{8}{1} \times \frac{5}{2} = \frac{40}{2} = 20$

$1 \times \frac{4}{5} \times \boxed{A} = 8$

$\frac{4}{5} \times \boxed{A} = 8$

$8 \div \frac{4}{5}$

$\frac{8}{1} \times \frac{5}{4} = \frac{40}{4}$

$= 10$

$1 \times 2 \times \boxed{C} = 8$

$\boxed{C} = 4$

$4 \times \frac{2}{5} \times \boxed{F} = 8$

$\frac{8}{5} \times \boxed{F} = 8$

$\frac{8}{1} \div \frac{8}{5}$

$\frac{8}{1} \times \frac{5}{8} = \frac{40}{8} = 5$

$1 \times 20 \times \boxed{I} = 8$

$20 \times \boxed{I} = 8$

$I = \frac{8}{20}$

$= \frac{4}{10}$

$= \frac{2}{5}$

$2 \times 5 \times \boxed{D} = 8$

$10 \times \boxed{D} = 8$

$\boxed{D} = \frac{8}{10}$

$= \frac{4}{5}$

(6)

23. The Burton family drink $2\frac{5}{6}$ litres of lemonade a day.

Their local shop sells 3 litres of lemonade for £2.80 or 2 litres for £1.95.

Work out the lowest amount of money that the family can spend in the shop to buy lemonade to last them for one week.

$2\frac{5}{6} \times 7 = 19\frac{5}{6}$ litres per week.

6 x 3 litres and 1 x 2 litres = 20 litres

6 x £2.80 = £16.80

1 x £1.95 = £1.95

+

£18.75

£ 18.75

(4)