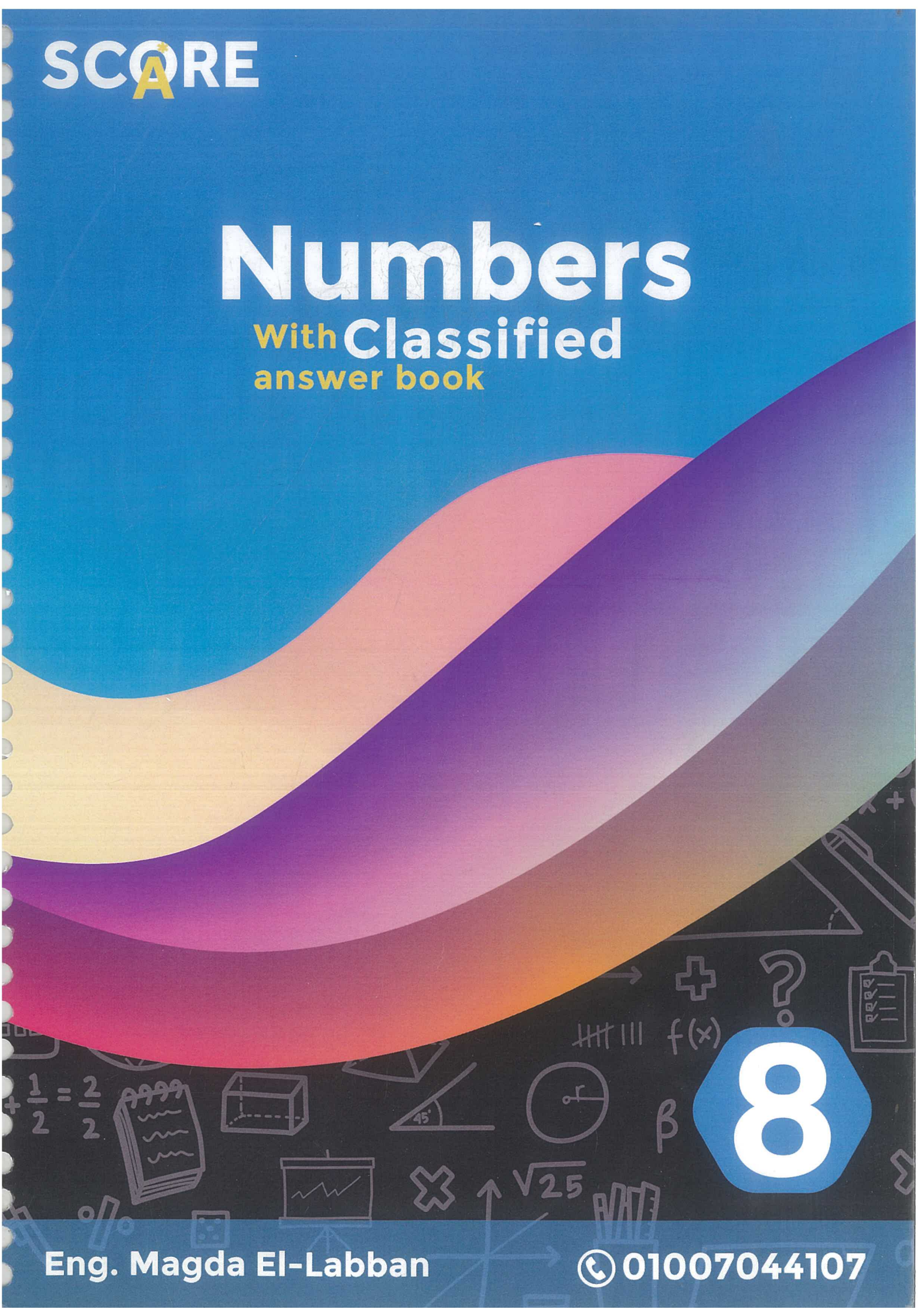
SCORE A

Numbers

With Classified answer book



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10- Multiplying fractions

1. Match the calculations to the correct answers.

$\frac{1}{3} \times \frac{4}{5}$	$\frac{2}{5} \times \frac{1}{3}$	$\frac{4}{5} \times \frac{2}{3}$	$\frac{3}{5} \times \frac{1}{3}$
$\frac{2}{15}$	$\frac{8}{15}$	$\frac{4}{15}$	$\frac{1}{5}$

2. Solve the calculations put the answer as fraction.

a) $\left(\frac{4}{5}\right)^2$

b) 0.3^2

c) $\left(\frac{3}{4}\right)^2 =$

d) $\frac{7}{\square} \times 0.1 = \frac{7}{90}$

e) $\frac{1}{\square} \times \frac{6}{7} = \frac{6}{49}$

f) $\frac{2}{5} \times \frac{4}{\square} = \frac{8}{25}$

3. Complete the multiplications.

a) $\frac{\square}{\square} \times \frac{\square}{\square} = \frac{5}{18}$

b) $\frac{\square}{\square} \times \frac{\square}{\square} = \frac{8}{15}$

c) $\frac{\square}{\square} \times \frac{\square}{\square} = \frac{1}{10}$

4. 120 men and 80 women were asked if they drive to work.

Altogether $\frac{1}{4}$ of the people said yes.

$\frac{1}{3}$ of the men said yes.

What fraction of the women said yes?

5. There are 25 boys and 32 girls in a club.

$\frac{2}{5}$ of the boys and

$\frac{1}{2}$ of the girls walk to the club.

The club leader picks at random a child from the children who walk to the club.

Work out the probability that this child is a boy.

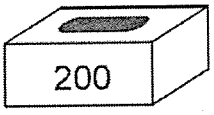
6. Danny shares a bag of 20 sweets with his friends.

He gives Mary $\frac{3}{5}$ of the sweets.

He gives Ann $\frac{1}{10}$ of the sweets.
He keeps the rest for himself.

How many sweets does Danny keep for himself?

7. A box contains 200 tissues.



Toby takes $\frac{3}{5}$ of these tissues.

Work out how many tissues he takes.

8. There are 800 people on the train at Manchester.

$\frac{1}{10}$ of these 800 people are children.

(a) (i) Work out $\frac{1}{10}$

$\frac{3}{8}$ of those 800 people are women.

(ii) Work out $\frac{3}{8}$ of 800

The rest of the 800 people are men.

(iii) Work out the number of men on the train.

320 of the 800 people are under 21 years old.

(b) Work out 320 out of 800 as a percentage.

9. There are 24 men in a room.

$\frac{1}{2}$ of the men are wearing a red shirt.

$\frac{1}{3}$ of the men are wearing a green shirt.

The rest of the men are wearing a blue shirt.

Work out the number of men wearing a blue shirt.

10. Find $\frac{1}{4}$ of 16.

11. Work out $\frac{4}{5}$ of 210 cm.

12. Work out $\frac{3}{5}$ of 200

13. Dora is working out $3\frac{1}{2} \times \frac{1}{5}$

$$3\frac{1}{2} \times \frac{1}{5} = 3 \times \frac{1}{5} + \frac{1}{2} \times \frac{1}{5}$$
$$= \frac{3}{5} + \frac{1}{10}$$
$$= \frac{6}{10} + \frac{1}{10} = \frac{7}{10}$$

Use Dora's method to find $2\frac{1}{3} \times \frac{2}{5}$

14. Work out these multiplications.

a) $2\frac{2}{3} \times 2\frac{1}{3}$

b) $3\frac{5}{6} \times 2\frac{1}{2}$

c) $\frac{9}{10} \times 3\frac{1}{4}$

15. Is the answer to $11 \times 3\frac{1}{2}$ a whole number?

☐ Yes ☐ No

Explain your answer.

16. Dave worked $1\frac{1}{2} \times 5\frac{1}{3}$

out He wrote $1 \times 5 = 5$ and $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$

so $1\frac{1}{2} \times 5\frac{1}{3} = 5\frac{1}{6}$

The answer of $5\frac{1}{6}$ is wrong.

Describe one mistake that Dave made.

17. There are 240 counters in a bag.

The counters are green or yellow or blue.

$\frac{3}{5}$ of the counters are green.

$\frac{1}{4}$ of the counters are yellow.

Work out the number of blue counters in the bag.

18. Work out these values if $x = \frac{1}{2}$, $y = \frac{3}{4}$ and $z = \frac{4}{5}$

a) xy b) yz c) xyz

11- Dividing Fractions

1. Work out:

a) $\frac{2}{3} \div \frac{1}{6}$

b) $\frac{1}{6} \div \frac{2}{3}$

c) $5 \div \frac{3}{10}$

d) $\frac{3}{10} \div 5$

2. a) How many pieces of wood $1\frac{3}{4}$ m long can be cut from a length of 9 m?

b) Find the area of a triangle with a base of $3\frac{5}{8}$ cm and perpendicular height of $2\frac{1}{2}$ cm.

c) A parallelogram with a base of 3.25 cm has an area of 12.6 cm^2
Use fractions to work out the height of the parallelogram.

3. If $a=1\frac{1}{7}$ and $b=3\frac{1}{3}$

(a) Find the value of ab.

Give your answer as a mixed fraction in its simplest form.

(b) Find the value of a+b

Give your answer as a mixed fraction in its simplest form.

4. In the first round of a gymnastics competition, James is given a score of $2\frac{2}{11}$
His score is later revised to account for the difficulty in that round.

His new score is $2\frac{2}{11} \times 1\frac{1}{12}$

(a) What is his new score?

Give your answer as a mixed fraction.

(b) In the second round of the competition, James scores $7\frac{1}{2}$
His score is again revised.

His score is now $7\frac{1}{2} \div \frac{2}{3}$

What is his new score?

Give your answer as a mixed fraction.

5. Natasha is cutting up rope.
She has 900 cm of rope.

Natasha uses $\frac{2}{5}$ of the rope to tie up a parcel.

She uses $\frac{1}{3}$ the rope for a craft project.

(a) What fraction of the original rope remains?

Give your answer as a fraction in its simplest form.

(b) Natasha then cuts up the remaining rope into four equal pieces.
What size, in cm, is each of these equal pieces of rope?