

# Year 8 Class 10 questions

**Q1**

Simplify fully.

$$72 : 16$$

$$\square : \square$$

$$9:2$$

**Q2**

Complete the simplified ratio.

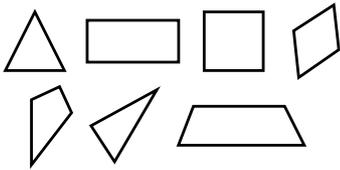
$$2.5 \text{ hours} : 45 \text{ min}$$

$$\square : \square$$

$$10:3$$

**Q3**

Find the ratio of triangles to quadrilaterals.



$$\square : \square$$

$$2:5$$

**Q4**

$$4 : 3 : 6$$

$$\square : \square : 18$$

$$12:9:18$$

**Q5**

Damper is made by mixing flour and water in the ratio 4 : 1. How much flour should be mixed with 2.5 cups of water?

$$\square \text{ cups}$$

$$10$$

**Q6**

Find the real distance between towns A and B measuring 11.2 cm apart on a map with a scale of 1 : 100 000.

$$\text{Distance} = \square \text{ km}$$

$$11.2 \text{ km}$$

**Q7**

Simplify fully.

$$180 : 160$$

$$\square : \square$$

$$9:8$$

**Q8**

Simplify fully.

$$90 : 240$$

$$\square : \square$$

$$3:8$$

**Q9**

Complete the simplified ratio.

$$3.75 : 0.06$$

$$\square : \square$$

$$125:2$$

**Q10**

Complete the simplified ratio.

$$0.2 : 3.75$$

$$\square : \square$$

$$4:75$$

**Q11**

There are 180 mandarins and 320 figs.  
Write the simple ratio of:

mandarins : figs  
 :  **9 : 16**

figs : mandarins  
 :  **16 : 9**

mandarins : total number of pieces of fruit  
 :  **9 : 25**

**Q12**

Orla has 4 dogs, 3 cats and 5 birds.  
Write the simple ratio of:

cats : birds  
 :  **3 : 5**

birds : dogs  
 :  **5 : 4**

dogs : total number of pets  
 :  **1 : 3**

**Q13**

5 : 12  
 : 78 **32.5 : 78**

**Q14**

5 : 21  
 33 :  **33 : 138.6**

**Q15**

Daisy is training for a race. She aims to run and ride in the ratio 3 : 5.

If she spends 30 minutes running, how long should she spend riding?

minutes **50 minutes**

**Q16**

Ruby and Finn share a packet of biscuits in the ratio 6 : 7.

If Ruby has 30 biscuits, how many biscuits are there altogether?

**65**

**Q17**

A scale of 1 : 1000 is the same as

1 cm : 100 m    **→** 1 cm : 10 m

1 cm : 1 m    1 cm : 100 cm

**Q18**

A scale of 1 : 10 000 is the same as

1 mm : 100 000    **→** 1 mm : 10 m

1 mm : 10 000    1 mm : 1 m

**Q19**

Simplify fully.

140 : 180 : 100  
 :  :  **7 : 9 : 5**

**Q20**

Simplify fully.

$240 : 90 : 150$

$\square : \square : \square \quad 8:3:5$

**Q21**

Complete the simplified ratio.

$0.3 : 0.6 : 1.5$

$\square : \square : \square \quad 1:2:5$

**Q22**

Complete the simplified ratio.

$3 : 0.48 : 4$

$\square : \square : \square \quad 75:12:100$

**Q23**

A chef combines 350 mL of oil, 200 mL of vinegar and 75 mL of lemon juice.

Write the simple ratio of:

vinegar : lemon juice

$\square : \square \quad 8:3$

lemon juice : oil

$\square : \square \quad 3:14$

oil : total mixture

$\square : \square \quad 14:25$

vinegar : oil : lemon juice

$\square : \square : \square \quad 8:14:3$

What fraction of the mixture is vinegar?

$\frac{3}{25} \quad \frac{14}{25} \quad \frac{8}{25} \quad \frac{8}{14} \quad \frac{8}{25}$

**Q24**

Jake has 120 marbles. 90 of them are clear, 15 of them are black and 15 the rest are coloured. Write the simple ratio of:

black : coloured

$\square : \square \quad 1:1$

coloured : clear

$\square : \square \quad 1:6$

clear : total number of marbles

$\square : \square \quad 3:4$

coloured : black : clear

$\square : \square : \square \quad 1:1:6$

What fraction of the marbles are black?

$\frac{1}{8} \quad \frac{1}{6} \quad \frac{3}{4} \quad \frac{1}{4} \quad \frac{1}{8}$

**Q25**

$9 : 4 : 3$

$\square : 45 : \square$

$101.25 : 45 : 33.75$

**Q26**

$4 : 9 : 7$

$115 : \square : \square$

$115 : 258.75 : 201.25$

**Q27**

In a class the ratio of boys to girls is 7 : 6. There are 12 girls.

Find the difference between the number of boys and girls.

$\square \quad 2$

**Q28**

In a display room the model aeroplanes to model cars is 5:3. There are 21 model cars on display.

Find the difference between the number of model cars and model aeroplanes.

**14****Q29**

A map uses a scale 5 cm represents 1.2 km. What distance is represented by 1 mm on the map?

m

**24 m****Q30**

A model car uses a scale 1 cm represents 42 cm. What length is represented by 15 cm on the model car?

m

**6.3 m**