Year 3 maths: Fractions of shapes and groups (Hard)

Maths · Fractions
Level: Hard

Student: _____ Date: _____

Instructions
- There are 10 questions. Read each one carefully.
- Write your answers on this paper. Use the space under a question to work it out.
- A grown-up can read a question aloud — that's fine.
- The answers are at the end. Check them together when you have finished.

Questions

1. What is 2/5 of 45?

Answer: ☐

Working:

2. Sam has 40 stickers. He gives away 3/8 of them. How many does he have left?

Answer: ☐ stickers

Working:

3. Take the number of halves in 9 away from the number of thirds in 7. What do you get?

Answer: ☐

Working:

4. A ferry carries 36 passengers. One quarter of them are children. The rest are adults. How many adults are on the ferry?

Circle one answer.

○ **A** 32 ○ **B** 27 ○ **C** 12 ○ **D** 18 ○ **E** 9

5. Ivy has 72 stickers. She gives one third of them to Zac and one quarter of them to Lou. She keeps the rest. How many stickers does Ivy keep?

Circle one answer.

○ **A** 36 ○ **B** 48 ○ **C** 65 ○ **D** 30 ○ **E** 42

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6. This strip is made of equal squares. If three-quarters of the squares were shaded, how many squares would NOT be shaded?

Circle one answer.

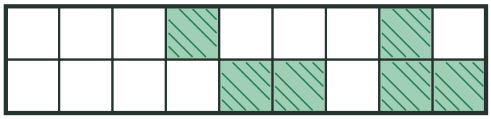


○ **A** 8 ○ **B** 13 ○ **C** 4 ○ **D** 12 ○ **E** 2

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7. A strip is made of 18 equal squares. Dev shades 6 of them. Then Nina shades two-thirds of the squares that are left. How many squares are not shaded?

Circle one answer.



○ **A** 8 ○ **B** 12 ○ **C** 10 ○ **D** 4 ○ **E** 14

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8. A school car park has 40 spaces. Five-eighths of the spaces are being used. How many spaces are empty?

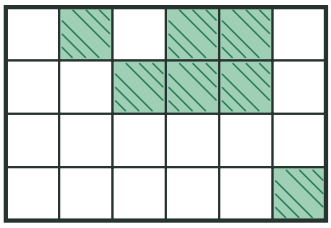
Circle one answer.

○ **A** 15 ○ **B** 5 ○ **C** 8 ○ **D** 35 ○ **E** 25

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9. A rectangle is made of 24 identical squares. 7 squares are shaded. How many more squares need to be shaded so that five-sixths of the rectangle is shaded?

Circle one answer.



○ **A** 20 ○ **B** 13 ○ **C** 4 ○ **D** 17 ○ **E** 27

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10. Three-quarters of the seats on a bus to Bathurst are taken. That is 24 seats. How many seats make half of all the seats on the bus?

Circle one answer.

○ **A** 18 ○ **B** 16 ○ **C** 32 ○ **D** 8 ○ **E** 12

Answer key

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1. 18

1/5 of 45 = 9, so 2/5 of 45 = 2 × 9 = 18.

2. 25 stickers

1/8 of 40 = 5, so 3/8 of 40 = 3 × 5 = 15. 40 − 15 = 25 left.

3. 3

Thirds in 7: 21. Halves in 9: 18. 21 − 18 = 3.

4. B — 27

One quarter of 36: 36 ÷ 4 = 9 children. The rest are adults: 36 − 9 = 27.

5. D — 30

One third of 72 is 24. One quarter of 72 is 18. 24 + 18 = 42 given away, so 72 − 42 = 30 are kept.

6. C — 4

16 squares in 4 equal parts: 4 squares a part. 3 quarters is 12 shaded, so 16 − 12 = 4 are not shaded.

7. D — 4

18 − 6 = 12 squares are left. Two-thirds of 12 is 8, so Nina shades 8. 12 − 8 = 4 are not shaded.

8. A — 15

One eighth of 40 is 5. Five eighths is 5 × 5 = 25 spaces used. 40 − 25 = 15 are empty.

9. B — 13

One sixth of 24 is 4, so five-sixths is 20 squares. 7 are shaded already: 20 − 7 = 13 more.

10. B — 16

24 is three quarters, so one quarter is 24 ÷ 3 = 8. Half is 2 quarters: 2 × 8 = 16.