

Year 5: Multiplying in your head: answers

Year 5 - Long Multiplication - Lesson 4.2

Answers. Final answers to the worksheet questions. Full step-by-step solutions for every question are free at websink.site/ks2-sats/maths/year-5/ch04-multiplication/multiplying-in-your-head/

Exercise 4B Multiplying in your head Non-calculator

1 Use a times table fact to work out each calculation.

(a) $60 \times 8 =$

Answer: 480

(b) $700 \times 4 =$

Answer: 2,800

(c) $50 \times 90 =$

Answer: 4,500

(d) $300 \times 70 =$

Answer: 21,000

2 Work out each multiplication by partitioning.

(a) $23 \times 4 =$

Answer: 92

(b) $38 \times 6 =$

Answer: 228

(c) $52 \times 7 =$

Answer: 364

(d) $206 \times 5 =$

Answer: 1,030

3 Partition the second number to work out each multiplication.

(a) $12 \times 14 =$

Answer: 168

(b) $15 \times 13 =$

Answer: 195

(c) $22 \times 12 =$

Answer: 264

(d) $17 \times 15 =$

Answer: 255

4 Double one number and halve the other to work out each calculation.

(a) $25 \times 16 =$

Answer: 400

(b) $15 \times 14 =$

Answer: 210

(c) $45 \times 18 =$

Answer: 810

(d) $35 \times 12 =$

Answer: 420

5 Multiply by the factors to work out each calculation.

(a) $17 \times 4 =$

Answer: 68

(b) $14 \times 8 =$

Answer: 112

(c) $23 \times 12 =$

Answer: 276

(d) $31 \times 18 =$

Answer: 558

6 Work out each multiplication in your head.

(a) $64 \times 5 =$

Answer: 320

(b) $48 \times 25 =$

Answer: 1,200

(c) $36 \times 50 =$

Answer: 1,800

(d) $73 \times 20 =$

Answer: 1,460

(e) $26 \times 15 =$

Answer: 390

7 Use a nearby easy number to work out each multiplication.

(a) $46 \times 9 =$

Answer: 414

(b) $52 \times 11 =$

Answer: 572

(c) $37 \times 99 =$

Answer: 3,663

(d) $24 \times 19 =$

Answer: 456

(e) $31 \times 21 =$

Answer: 651

8 Write the missing number in each box. Both sides of the equals sign must have the same value.

(a) $3 \times 8 = 6 \times \boxed{?}$

Answer: 4

(b) $5 \times 8 = 10 \times \boxed{?}$

Answer: 4

(c) $6 \times 7 = 3 \times \boxed{?}$

Answer: 14

(d) $4 \times 15 = \boxed{?} \times 30$

Answer: 2

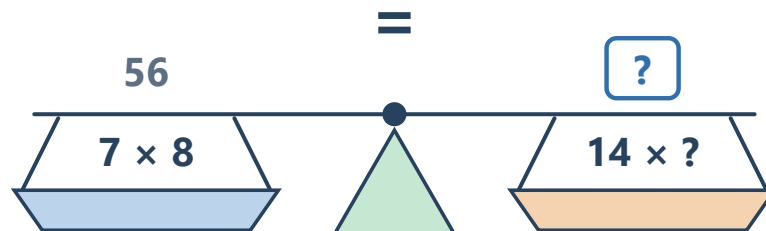
(e) $5 \times 6 = 20 + \boxed{?}$

Answer: 10

(f) $3 \times 4 = \boxed{?} - 8$

Answer: 20

9 The picture shows a balance. Find the missing number. $7 \times 8 = 14 \times \boxed{?}$



Answer: 4

10 Choose a clever method for each calculation and work it out.

(a) $45 \times 20 =$

Answer: 900

(b) $6 \times 98 =$

Answer: 588

(c) $16 \times 25 =$

Answer: 400

- 11** A baker puts 25 buns on each tray. She fills 36 trays. How many buns is that?

Answer: 900 buns

- 12** Noah says, "To multiply by 99, I multiply by 100 and take away one lot." Use his method to work out 46×99 .

Answer: 4,554

- 13** Leo works out 36×25 like this: " $36 \times 100 = 3,600$, then halve it: 1,800." What mistake has Leo made? What is the correct answer?

Answer: 900. Leo halved only once.

- 14** Always, sometimes or never?

- (a) Multiplying a number by 5 gives the same answer as multiplying it by 10 and halving.

Answer: Always

- (b) If you double one number and halve the other, the answer to the multiplication gets bigger.

Answer: Never

- 15** Prove it! Amir says, " 15×18 , 30×9 and 45×6 all have the same answer." Prove that Amir is right.

Answer: All equal 270

- 16** Challenge! Work out $4 \times 17 \times 25$ in your head. Explain which order you used and why it is clever.

Answer: 1,700