

Final Test — Form A

Answer key

4.OA

4.NBT

4.NF

4.MD

4.G

24 problems

1. A pond has 8 ducks. A lake has 6 times as many ducks as the pond. Write a multiplication equation that shows how many ducks are on the lake, then give the number.

Answer $48 = 6 \times 8$; 48 ducks

"6 times as many as 8" means $6 \times 8 = 48$ ducks.

2. A wildlife count recorded 4,825,300 insects in a forest. What is the value of the digit 8 in this number?

Answer 800,000

The 8 is in the hundred-thousands place, so its value is $8 \times 100,000 = 800,000$.

3. A flock of birds has 47,382 members. Round this number to the nearest **thousand**.

Answer 47,000

The hundreds digit is 3, which is less than 5, so round down: $47,382 \rightarrow 47,000$.

4. A zookeeper arranges 27 turtles. Is 27 **prime** or **composite**? List a factor pair other than 1 and 27 to support your answer.

Answer Composite; $3 \times 9 = 27$

27 has factors besides 1 and itself (for example 3 and 9, since $3 \times 9 = 27$), so it is composite.

5. Of the animals at a shelter, $\frac{3}{5}$ are dogs. Write an equivalent fraction with a denominator of 20.

Answer $\frac{12}{20}$

Multiply the top and bottom by 4: $\frac{3}{5} = \frac{3 \times 4}{5 \times 4} = \frac{12}{20}$.

6. A caterpillar eats $\frac{9}{100}$ of a leaf. Write this amount as a decimal.

Answer 0.09

Nine hundredths is written 0.09.

7. A reserve has 38,547 birds in the north field and 26,819 birds in the south field. How many birds are there in all?

Answer 65,366

$38,547 + 26,819 = 65,366$.

8. A coral reef once had 70,205 fish. After a storm, 38,649 remained. How many fish were lost?

Answer 31,556

$70,205 - 38,649 = 31,556$.

9. A squirrel buried $\frac{3}{8}$ of its acorns and a chipmunk buried $\frac{2}{5}$ of its acorns. Compare the fractions using $<$, $>$, or $=$.

$\frac{3}{8} \square \frac{2}{5}$

Answer $\frac{3}{8} < \frac{2}{5}$

Cross-multiply: $3 \times 5 = 15$ and $2 \times 8 = 16$. Since $15 < 16$, we get $\frac{3}{8} < \frac{2}{5}$.

10. A garden snail crawls $\frac{3}{8}$ of a meter, rests, then crawls another $\frac{7}{8}$ of a meter. How far did it crawl in all? Write your answer in simplest form.

Answer $1\frac{1}{4}$ meters

$$\frac{3}{8} + \frac{7}{8} = \frac{10}{8} = \frac{5}{4} = 1\frac{1}{4} \text{ meters.}$$

11. Two animal trails are shown below. Are they **parallel** or **perpendicular**?



Answer Perpendicular

The two trails cross to form a right angle (marked by the small square), so they are perpendicular.

12. Find the **perimeter** of this rectangular butterfly garden.



Answer 46 m

$$P = 2(l + w) = 2(15 + 8) = 2(23) = 46 \text{ m.}$$

13. A nature center mails 327 newsletters to each of its 24 chapters. How many newsletters is that in all?

Answer 7,848

$$327 \times 24 = 327 \times 20 + 327 \times 4 = 6,540 + 1,308 = 7,848.$$

14. A beekeeper counts the bees leaving a hive each minute and sees a pattern: 5, 11, 17, 23, ... Write the next number, and state one feature that every number in the pattern shares.

Answer 29; every term is an odd number

The pattern adds 6 each time, so the next term is $23 + 6 = 29$. Adding 6 to an odd number keeps it odd, so every term is odd.

15. A bird watcher tracks an eagle's turn. The whole turn $\angle ABC$ measures 137 degrees and is split by ray BD into a 58-degree part. Find the measure of the other part, $\angle DBC$.



Answer 79 degrees

The parts add to the whole angle: $\angle DBC = 137 - 58 = 79$ degrees.

16. A red fox ran $5\frac{1}{4}$ miles and a gray fox ran $2\frac{3}{4}$ miles. How much farther did the red fox run? Write your answer in simplest form.

Answer $2\frac{1}{2}$ miles

$$5\frac{1}{4} - 2\frac{3}{4} = \frac{21}{4} - \frac{11}{4} = \frac{10}{4} = \frac{5}{2} = 2\frac{1}{2} \text{ miles.}$$

17. Each hummingbird feeder holds $\frac{2}{3}$ cup of nectar. A ranger fills 6 feeders. How many cups of nectar are used? Write your answer in simplest form.

Answer 4 cups

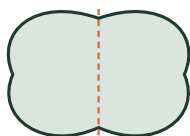
$$6 \times \frac{2}{3} = \frac{12}{3} = 4 \text{ cups.}$$

18. An anteater's tongue is 5 feet long. How many **inches** is that? (There are 12 inches in a foot.)

Answer C) 60 inches

Multiply feet by 12: $5 \times 12 = 60$ inches.

19. How many **lines of symmetry** does this butterfly shape have?



Answer 1

The butterfly's left and right wings match across the single vertical fold line, so it has 1 line of symmetry.

20. Four ponds are filled to these fractions of full: 0.5, 0.49, 0.7, and 0.68. Which pond is the **fullest**?

Answer C) 0.7

Write each as hundredths: 0.50, 0.49, 0.70, 0.68. The greatest is 0.70, so the 0.7 pond is fullest.

21. A keeper packs 2,945 fish equally into 6 coolers, putting in as many whole fish as possible. How many fish go in each cooler, and how many are left over?

Answer 490 each, with 5 left over

$$2,945 \div 6 = 490 \text{ remainder } 5, \text{ since } 6 \times 490 = 2,940 \text{ and } 2,945 - 2,940 = 5.$$

22. A rectangular wolf enclosure measures 23 m long and 14 m wide. Keepers cover the whole floor with square mats that are each 1 m on a side. They already have 300 mats. How many **more** mats do they need?

Answer 22 more mats

Floor area = $23 \times 14 = 322$ square m, so 322 mats are needed. They have 300, so they need $322 - 300 = 22$ more.

23. A deer sanctuary has 7 enclosures with 6 deer in each one. Every deer eats 3 kilograms of hay a day. How many kilograms of hay does the sanctuary need each day to feed all the deer?

Answer 126 kilograms

Total deer = $7 \times 6 = 42$. Hay = $42 \times 3 = 126$ kilograms each day.

24. A park ranger fills bird feeders with a mix. Each feeder gets $\frac{2}{8}$ pound of sunflower seeds and $\frac{3}{8}$ pound of cracked corn. The ranger fills 4 feeders. How many pounds of mix is used in all? Write your answer in simplest form.

Answer $2\frac{1}{2}$ pounds

Each feeder uses $\frac{2}{8} + \frac{3}{8} = \frac{5}{8}$ pound. For 4 feeders: $4 \times \frac{5}{8} = \frac{20}{8} = \frac{5}{2} = 2\frac{1}{2}$ pounds.
