

Homework & Practice 4-3

Estimate: Use Rounding

Another Look!

Estimate 28×36 .

Replace the factors with the closest multiple of 10.

You can use place value to round and use rounding to estimate products.

Step 1

Round both numbers in 28×36 .

Round 28 to the nearest ten.

28 is closer to 30 than 20, so 28 rounds to 30.

Round 36 to the nearest ten.

36 is closer to 40 than 30, so 36 rounds to 40.

Step 2

Estimate the product.

$$\begin{array}{r} 28 \times 36 = n \\ \downarrow \quad \downarrow \\ 30 \times 40 = 1,200 \end{array}$$

So, the product is about 1,200.



For **1–10**, estimate each product.

1. 31×12 rounds to

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}.$$

2. 28×17 rounds to

$$\underline{\quad} \times \underline{\quad} = \underline{\quad}.$$

3. 54×14

4. 44×22

5. 45×19

6. 34×48

7. 64×76

8. 15×38

9. 88×23

10. 11×68

For **11–12**, estimate to check if the given answer is reasonable.

11. $39 \times 37 = 2,183$

Rounds to $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Reasonable Not Reasonable

12. $27 \times 83 = 2,241$

Rounds to $\underline{\quad} \times \underline{\quad} = \underline{\quad}$

Reasonable Not Reasonable

Round each factor to the nearest ten to estimate the product.



13. Sean baked 18 dozen chocolate cupcakes and 13 dozen vanilla cupcakes. About how many cupcakes did Sean bake? Explain.

There are 12 cupcakes in 1 dozen.



14. The art teacher has 30 boxes of crayons with 16 crayons in each box. She gives the students 10 of the boxes to use. Explain how to find the number of crayons the art teacher has left.

15. **Number Sense** Eric estimated 28×48 by finding 30×50 . He estimated the product to be 1,500. Eric thinks the actual product will be greater. Is Eric correct? Explain.

16. **Math and Science** Wind turbines generate large amounts of electricity from wind energy. The blades on a wind turbine can revolve 22 times per minute. If a wind turbine runs for 1 hour, about how many times do the blades revolve? Remember, there are 60 minutes in 1 hour.

17. **Higher Order Thinking** Lenore rounds each factor to the nearest ten to estimate the product of 51×37 as 1,500. Is Lenore's estimate reasonable? Explain.

© Common Core Assessment

18. A park ranger in Everglades National Park counted the number of alligator eggs in 28 nests. On average, there were 40 eggs in each nest. About how many alligator eggs did the ranger count?
- (A) About 80 eggs
 - (B) About 120 eggs
 - (C) About 800 eggs
 - (D) About 1,200 eggs
19. A deep-sea fisherman went fishing 14 times last month. He caught 28 fish each time. About how many fish did the fisherman catch last month?
- (A) About 100 fish
 - (B) About 200 fish
 - (C) About 300 fish
 - (D) About 400 fish