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Homework & Practice 5-3

Mental Math: Estimate Quotients for Greater Dividends

Another Look!

Estimate 2,946 ÷ 5.

You can use mental math strategies to estimate quotients.

Use rounding.

2,946 rounds to 3,000.

3,000 ÷ 5 = 600

So, 2,946 ÷ 5 is about 600.

Use patterns.

5 × 6 = 30
5 × 600 = 3,000

So, 2,946 ÷ 5 is about 600.

For **1–18**, estimate each quotient.

1. 1,561 ÷ 8

What is 8 × 2? _____

What is 8 × 20? _____

What is 8 × 200? _____

What is 1,600 ÷ 8? _____

So, 1,561 ÷ 8 is about _____.

2. 2,008 ÷ 7

What is 7 × 3? _____

What is 7 × 30? _____

What is 7 × 300? _____

What is 2,100 ÷ 7? _____

So, 2,008 ÷ 7 is about _____.

3. 461 ÷ 9

4. 2,356 ÷ 6

5. 5,352 ÷ 9

6. 279 ÷ 9

7. 2,449 ÷ 8

8. 3,124 ÷ 6

9. 4,519 ÷ 5

10. 915 ÷ 3

11. 2,120 ÷ 5

12. 423 ÷ 4

13. 3,305 ÷ 7

14. 1,803 ÷ 2

15. 8,167 ÷ 9

16. 1,216 ÷ 6

17. 1,007 ÷ 2

18. 4,170 ÷ 8

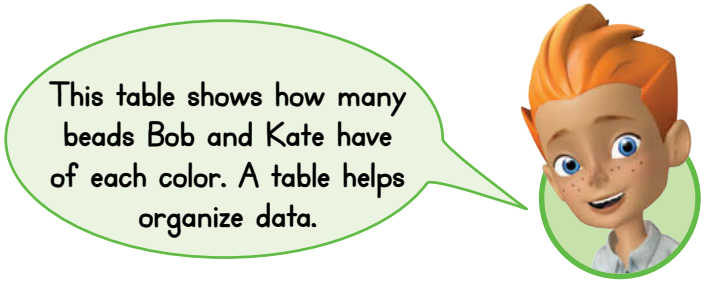
For **19–21**, use the table at the right.

19. Bob and Kate are making bracelets to sell at a craft fair. Determine about how many bracelets Bob and Kate can make with each color of bead. Complete the table.

20. About how many bracelets can they make before they run out of at least one color of bead? Which color of bead will they run out of first?

Color	Number of Beads	Beads per Bracelet	Estimated Number of Bracelets
Blue	258	6	
Silver	428	9	
Rose	102	3	
White	258	7	

21. There is a special-rush order for 7 bracelets of each color. How many beads are needed for 7 bracelets of each color?



22. **MP.2 Reasoning** The students who run the school store ordered 1,440 pencils. They are putting them in packages of 6 pencils. About how many packages can they make? Will the exact answer be more or less than the estimate? Explain.

23. **Higher Order Thinking** Find two estimates for 4,396 ÷ 4 by rounding the dividend to the nearest hundred and also to the nearest thousand. Compare the estimates.

Common Core Assessment

24. Select all the expressions that have an estimated quotient close to 400.

- ☐ 6,321 ÷ 2
- ☐ 1,193 ÷ 3
- ☐ 5,055 ÷ 8
- ☐ 3,705 ÷ 9
- ☐ 1,649 ÷ 4

25. Select all the expressions that have an estimated quotient close to 600.

- ☐ 4,900 ÷ 7
- ☐ 1,234 ÷ 6
- ☐ 5,366 ÷ 9
- ☐ 1,332 ÷ 2
- ☐ 1,795 ÷ 3