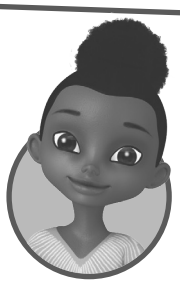
Name _____

Practice Video Tools Games

Additional Practice 6-1
Patterns for Dividing with Decimals

Another Look!



Sanjai has 275 pounds of clay. He uses the clay to make 100 identical bowls. How much clay does he use for each bowl?

To divide by 10, or 10^1, move the decimal point 1 place to the left.

To divide by 100, or 10^2, move the decimal point 2 places to the left.

$275 \div 100 = \mathbf{2.75} = 2.75$

Sanjai uses 2.75 pounds of clay for each bowl.

Leveled Practice In **1–18**, use mental math and patterns to complete each problem.

1. $2{,}500 \div 10 =$ 250
$250 \div$ 10 $= 25$
25 $\div 10 = 2.5$
$2.5 \div 10 =$ 0.25

2. $20 \div$ 10 $= 2$
$20 \div 10^2 =$ 0.2
$20 \div 10^3 =$ 0.02
$20 \div 10^4 =$ 0.002

3. \$6,750 $\div 10 =$ \$675
\$675 $\div$ 10 $=$ \$67.50
\$6,750 $\div 10^2 =$ \$67.50
\$6,750 $\div 10^3 =$ \$6.75

4. $9{,}600 \div 10^1 =$ 960
$960 \div 10^1 =$ 96
$96 \div 10^1 =$ 9.6
$9.6 \div 10^1 =$ 0.96

5. \$800 $\div$ 10 $=$ \$80
\$80 $\div 10 =$ \$8
\$8 $\div 10 =$ \$0.80
\$0.80 $\div 10 =$ \$0.08

6. $1{,}200 \div 10^3 =$ 1.2
$120 \div 10^1 = 12$
12 $\div 10^1 = 1.2$
$1.2 \div 10^2 =$ 0.012

7. $4 \div 100$ 0.04

8. $15 \div 10^0$ 15

9. $450 \div 10$ 45

10. $60 \div 100$ 0.6

11. $55 \div 10$ 5.5

12. $30.9 \div 100$ 0.309

13. $8{,}020 \div 10^2$ 80.2

14. $150 \div 10^3$ 0.15

15. $16 \div 10^3$ 0.016

16. $1.8 \div 10^1$ 0.18

17. $720 \div 100$ 7.2

18. $3{,}500 \div 10^4$ 0.35

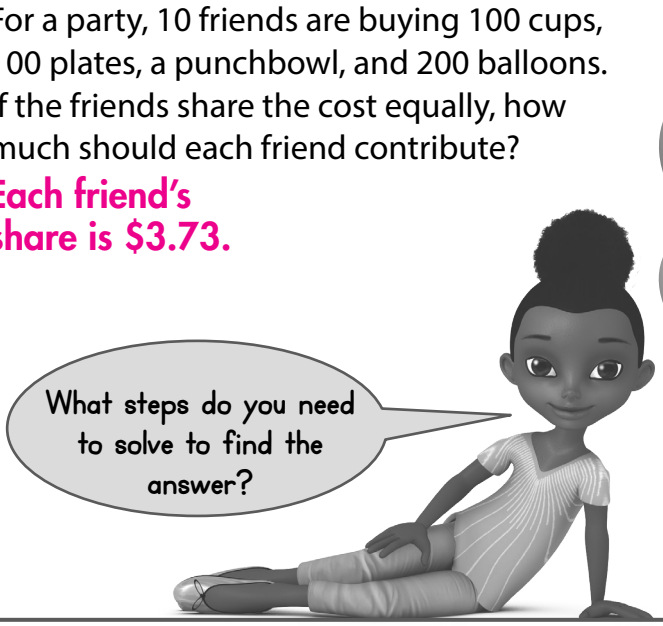
Remember that you may need to insert zeros when you move the decimal point to the left.

19. The city has a section of land that is 3,694.7 feet long. The city wants to partition this length to form 10 equal-sized garden plots. How long will each garden plot be? **369.47 ft**

20. Higher Order Thinking A stack of 10^2 pennies is 6.1 inches tall. A stack of 10^2 dimes is 5.3 inches tall. How much taller is a stack of 10 pennies than a stack of 10 dimes? **0.08 inch**

21. For a party, 10 friends are buying 100 cups, 100 plates, a punchbowl, and 200 balloons. If the friends share the cost equally, how much should each friend contribute?

Each friend's share is $3.73.



DATA

Party Supplies	
100 balloons	$7.80
100 plates	$4.75
100 cups	$5.45
100 napkins	$2.09
10 invitations	$1.60
plastic punchbowl	$11.50

22. Critique Reasoning Lance says that $2{,}376 \div 10^2$ is the same as $2{,}376 \times 0.1$. Is he correct? Why or why not?

No, he is not correct. $2{,}376 \div 10^2 = 23.76$, and $2{,}376 \times 0.1 = 237.6$

23. On a large map, the distance from Austin, Texas, to Milwaukee, Wisconsin, is 13.7 inches. The actual distance is about 1,000 miles. What is the distance on the same map from Indianapolis, Indiana, to Louisville, Kentucky, if the actual distance is about 100 miles? Round your answer to the nearest tenth.

1.4 inches

Assessment Practice

24. Choose the equations in which $n = 100$ will make the equation true.

- [x] $12.4 \div n = 0.124$
- [x] $3.8 \div n = 0.038$
- [ ] $52{,}350 \div n = 52.35$
- [ ] $850.4 \div n = 85.04$
- [x] $0.41 \div n = 0.0041$

25. Choose the equations in which $d = 10^3$ will make the equation true.

- [ ] $37{,}162 \div d = 3.7162$
- [ ] $1{,}041.6 \div d = 1{,}041.6$
- [x] $2.7 \div d = 0.0027$
- [ ] $168.2 \div d = 1.682$
- [x] $80.7 \div d = 0.0807$