



SKILL 19: Estimating Quotients

To estimate a quotient, choose numbers close to the dividend and the divisor that are easy to divide.

Example 1

Estimate: $25.2 \div 6.4$.

$$\begin{array}{r} 25.2 \div 6.4 \\ \downarrow \quad \downarrow \\ 24 \div 6 = 4 \end{array}$$

Look at the divisor first. 6.4 is close to 6. 24 is a number close to 25.2 that is easy to divide by 6.

An estimated quotient is 4.

Example 2

Estimate: $189.44 \div 26$.

$$\begin{array}{r} \downarrow \quad \downarrow \\ 200 \div 25 = 8 \end{array}$$

An estimated quotient is 8.

Guided Practice

Estimate each quotient.

1. $154.1 \div 46.9$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 150 \div 50 = \underline{\quad} \end{array}$$

2. $57.9 \div 8$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 56 \div 8 = \underline{\quad} \end{array}$$

3. $9.16 \div 5.2$

$$\begin{array}{r} \downarrow \quad \downarrow \\ 10 \div 5 = \underline{\quad} \end{array}$$

Estimate each quotient. Show what numbers you used.

4. $35.9 \div 8.7$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

5. $392.7 \div 4.2$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

6. $23.8 \div 8$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

7. $46.2 \div 9$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

8. $486.1 \div 24.9$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

9. $17.1 \div 3.2$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

10. $53.1 \div 5.9$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

11. $62 \div 9.8$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

12. $50 \div 7.1$

$$\begin{array}{r} \downarrow \quad \downarrow \\ \underline{\quad} \div \underline{\quad} = \underline{\quad} \end{array}$$

SKILL 19: Practice

Estimate each quotient.

- | | |
|-----------------------------|-----------------------------|
| 1. $37.16 \div 8.7$ _____ | 2. $121.7 \div 2.9$ _____ |
| 3. $14.6 \div 6.8$ _____ | 4. $80.1 \div 4$ _____ |
| 5. $515.3 \div 56$ _____ | 6. $106.9 \div 0.95$ _____ |
| 7. $245.6 \div 59$ _____ | 8. $16.42 \div 8$ _____ |
| 9. $76.7 \div 25$ _____ | 10. $271.3 \div 9.03$ _____ |
| 11. $798.6 \div 38.5$ _____ | 12. $42.8 \div 6.7$ _____ |
| 13. $13.86 \div 2.3$ _____ | 14. $62.1 \div 5.8$ _____ |
| 15. $608.7 \div 19$ _____ | 16. $36.1 \div 12.2$ _____ |

Use estimation to solve.

17. Lynne bought 12 golf balls for \$14.98. Did each golf ball cost more than or less than \$1.00? _____
18. The track team paid \$179.50 for 9 sweatshirts. About how much did each sweatshirt cost? _____
19. The soccer coach bought 5 packages of socks for \$46.25. Each package contained 3 pairs of socks. If he sells the socks to his players for \$3.00 a pair, will he lose money? Explain.



20. Estimate: $34.6 \div 7$.

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|-------|-----|
| A 50 | C 5 |
| B 0.5 | D 4 |

Skill 19

21. Subtract: $19.7 - 1.74$.

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|---------|---------|
| F 0.23 | H 2.3 |
| G 17.96 | J 18.06 |

Skill 7