

ESTIMATION

NAME: _____

THIS HANDOUT IS DESIGNED TO BE USED WITH THE ESTIMATION VIDEO.

Estimation (\approx) is a rough calculation of a number or value. It is not exact but close enough to use in everyday life. It can save you time and make mathematics easier.

Helpful Examples

ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE
42	→ 40	789	→ 800	254	→ 250

Now your turn. Milky has 23 marbles and just received six new bags of marbles in the mail. Help her make a quick estimate of how many marbles are in each bag.

1. $24 \approx$ _____
2. $132 \approx$ _____
3. $15 \approx$ _____
4. $67 \approx$ _____
5. $204 \approx$ _____
6. $48 \approx$ _____

There are 2,000,000 books at Penelope Library. Kurt found 6 boxes of books in the basement. Help him make a quick estimate of how many books are in each box.

7. $178 \approx$ _____
8. $1,623 \approx$ _____
9. $721 \approx$ _____
10. $650 \approx$ _____
11. $948 \approx$ _____
12. $25 \approx$ _____

Critical Thinking

13. Does it matter how many marbles or books they have when estimating? Yes or No and Explain your answer.

14. Why might some of your answers be different from someone else's? Explain and give an example.

Round each number to the nearest hundreds place.

Examples: $467 \approx 500$ or $4,821 \approx 4,800$

15. $2,321 \approx$ _____
16. $950 \approx$ _____
17. $8,683 \approx$ _____

Round each number to the nearest tens place.

Examples: $28 \approx 30$ or $467 \approx 470$

18. $87 \approx$ _____
19. $453 \approx$ _____
20. $5,121 \approx$ _____

Round each number to the nearest whole number.

Examples: $9.67 \approx 10$ or $48.21 \approx 48$

21. $8.39 \approx$ _____
22. $41.76 \approx$ _____
23. $189.6 \approx$ _____

ESTIMATION CONTINUED

NAME: _____

Add using estimation. Show your estimates.

24. $46 \rightarrow 50$ 25. $723 \rightarrow$ 26. $5,308 \rightarrow$ 27. $75 \rightarrow$
 $+ 92 \rightarrow 90$ $+ 684 \rightarrow$ $+ 2,762 \rightarrow$ $+ 349 \rightarrow$

Subtract using estimation. Show your estimates.

28. $82 \rightarrow$ 29. $650 \rightarrow$ 30. $9,850 \rightarrow$ 31. $1,378 \rightarrow$
 $- 27 \rightarrow$ $- 409 \rightarrow$ $- 3,299 \rightarrow$ $- 467 \rightarrow$

Multiply using estimation. Show your estimates.

32. $64 \rightarrow$ 33. $819 \rightarrow$ 34. $3,275 \rightarrow$ 35. $750 \rightarrow$
 $\times 8 \rightarrow$ $\times 25 \rightarrow$ $\times 97 \rightarrow$ $\times 431 \rightarrow$

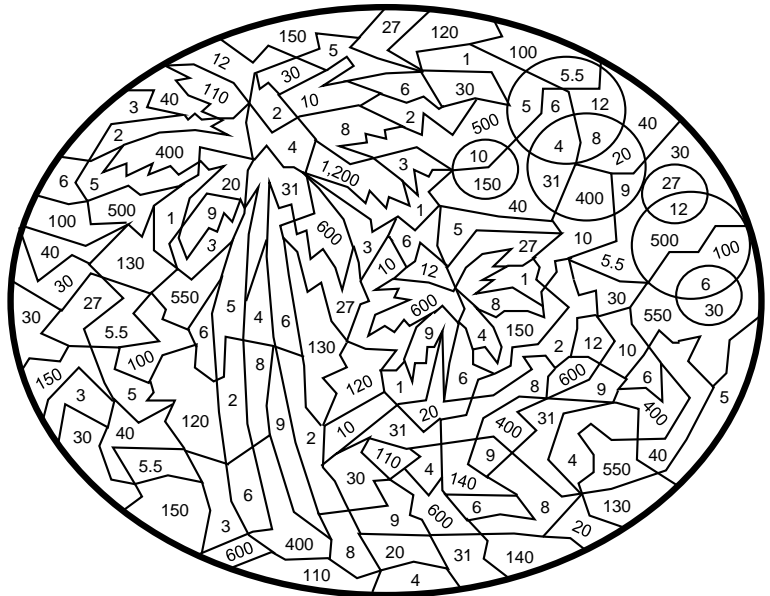
Divide using estimation. Show your estimates.

36. $\overline{) 823}$ 37. $\overline{) 319}$ 38. $\overline{) 578}$ 39. $\overline{) 981}$

Answer, Find, and Shade

Circle the best estimation for each problem.

40. $148 - 41$ 41. $73 + 65$
 150 100 110 120 140 130
42. $9 \overline{) 218}$ 43. 18×33
 27 20 30 600 500 550
44. $32 \overline{) 256}$ 45. $16.32 + 14.50$
 6 8 12 31 30 1
46. 2.76×3.42 47. $7.28 - 2.88$
 10 6 9 5 5.5 4



Word problems.

48. In a random sample, 20 out of 50 students said they prefer chocolate ice cream. How many servings should the school cafeteria prepare for 1,000 students?
49. In a random sample, 24 out of 60 households had a dog in the town of Nowaday. If the town has 3,000 households, approximately how many of the households have a dog?