

1. Don works 18 hours a week. Which expression shows a good way to use rounding to estimate how many hours Don will work in 52 weeks?

(A) 10×50
(B) 10×60
(C) 20×50
(D) 18×60

2. There are 24 cheer teams competing in a contest. There are 18 cheerleaders on each team. Select all the expressions that are **NOT** good ways to use compatible numbers to estimate the number of cheerleaders competing.

20×20
 25×18
 18×24
 10×10
 20×15

3. There are 21 rows of seats. Each row has 42 seats. Use rounding to estimate the total number of seats.

4. A movie theater sells 50 tickets for each showing of a movie. The theater showed the movie 40 times. How many tickets did the theater sell?

(A) 20,000 tickets (C) 200 tickets
(B) 2,000 tickets (D) 20 tickets

5. Margo hiked 12 miles 13 times last month. She hiked 14 miles 12 times this month.

Part A

Draw arrays or area models to find the number of miles Margo hiked during the past two months.

Part B

Write and solve equations to represent your arrays or area models.

6. Elaine is making 20 pinecone wreaths to sell at a fair. She needs 13 pinecones for each wreath. How many pinecones does Elaine need in all?

7. Mr. Hans bought tiles for his tile business. Each box of tiles costs \$30. Draw lines to match the number of boxes with the total cost.

| | |
|----------|---------|
| 40 boxes | \$2,400 |
| 24 boxes | \$570 |
| 80 boxes | \$1,200 |
| 19 boxes | \$720 |

8. A florist makes centerpieces. He puts 18 roses in each centerpiece. Which is the best way to use compatible numbers to estimate the number of roses the florist needs for 24 centerpieces?

- (A) $10 \times 25 = 250$ (C) $25 \times 30 = 750$
 (B) $20 \times 25 = 500$ (D) $30 \times 30 = 900$

9. Elizabeth makes necklaces. Each necklace has 16 beads. Write each number from the box in the correct space in the table to show the number of beads needed for each number of necklaces.

| | | |
|-------|---------------------|-----------------|
| 50 | Number of Necklaces | Number of Beads |
| 90 | 10 | |
| 160 | 30 | |
| 480 | | 800 |
| 1,440 | | |

10. Justine's plant stand has 6 shelves. Each shelf holds 18 plants. Use properties of operations to find the number of plants Justine's plant stand can hold. Use rounding to check if your answer is reasonable.

11. Joe gets paid \$25 to mow the lawn. He plans on mowing the lawn 19 times before the end of summer. Write and solve an equation to find the amount of money Joe will make.

12. When the Discount Tire Store sells a new tire, the profit is \$15. Which expression would you use to find the profit the store receives if they sell 60 new tires in one day?

- (A) 15×15
 (B) 60×60
 (C) 60×1
 (D) 60×15

Name _____

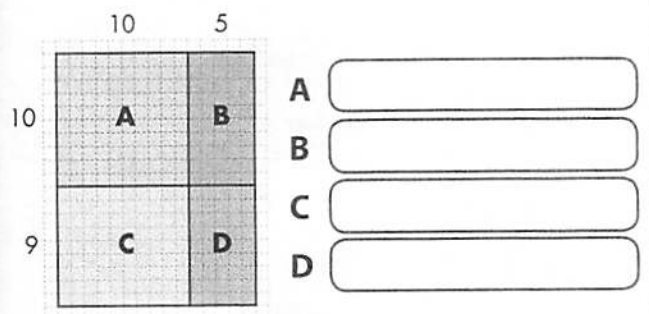
13. Tess has 15 pages in her coin collector's album. Each page holds 32 coins. Tess wants to find how many coins will fit in her entire album. Which partial product is missing from Tess's work?

- (A) 15
- (B) 150
- (C) 315
- (D) 480
- $$\begin{array}{r}
 32 \\
 \times 15 \\
 \hline
 10 \\
 \square \\
 20 \\
 + 300 \\
 \hline
 480
 \end{array}$$

14. Jonah bought 25 postcards that cost 17 cents each. He used partial products to find the total cost in cents. Which are **NOT** possible partial products for 25×17 ?

- 35
- 50
- 60
- 140
- 170

15. Lorin drew an area model to find 19×15 . Write the partial product for each rectangle in the area model.



16. The librarian ordered 29 sets of bookmarks. Each set contained 20 bookmarks. How many bookmarks did the librarian order?

17. Large tables in the library have 18 chairs and small tables have 12 chairs.

Part A

Draw an array or an area model to find how many chairs are at 15 large tables.

Part B

Use place-value strategies or properties of operations to find how many chairs are at 19 small tables. Use rounding to check if your answer is reasonable.

18. LuAnn is practicing for her school's math Olympiad. Which expression shows one way LuAnn can use partial products to find 60×78 ?

- (A) $(60 \times 70) + (60 \times 8)$
- (B) $(60 \times 70) + (60 \times 78)$
- (C) $(60 \times 70) + (60 \times 80)$
- (D) $(6 \times 70) + (6 \times 8)$

19. Jack's landscape service charges \$78 to plant a tree. What is the total cost to plant 18 trees on Tuesday and 23 trees on Wednesday? Write and solve equations.

20. A school bought 28 new microscopes. The price for each microscope was \$87. What was the cost for all the microscopes? Use each number from the box once to complete and solve the equation.

$$\begin{array}{r}
 28 \\
 \times 87 \\
 \hline
 56 \\
 14 \square \\
 6 \square 0 \\
 + \square, 600 \\
 \hline
 \$ \square, 4 \square \square
 \end{array}$$

| | |
|---|---|
| 0 | 1 |
| 2 | 3 |
| 4 | 6 |

21. Tori's goal is to learn 15 new Spanish words each day. If Tori meets her goal, how many new Spanish words will she have learned after 40 days?

22. Philip earns \$11 an hour. He recorded the number of hours he worked over a one-month period.

| Philip's Hours | |
|----------------|------------------------|
| Week | Number of Hours Worked |
| Week A | 15 |
| Week B | 24 |
| Week C | 22 |
| Week D | 18 |

Use compatible numbers to estimate how much Philip earned during the one-month period.