Mathematics
Grade 3

Wall Mathematics, 3 Unit_16

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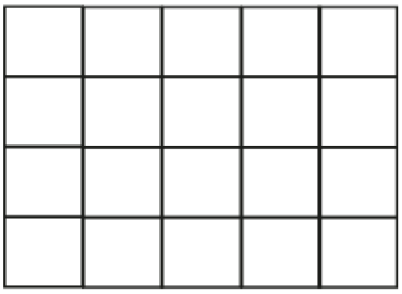
WAKE COUNTY SCHOOLS **2013 - 2014**

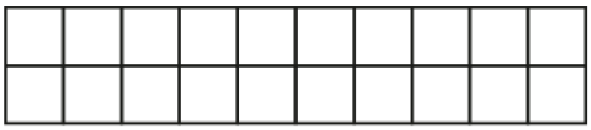
1. Use the images shown to answer the question.

Figure A



 =1 square unit

Figure B



 =1 square unit

Which of these statements is correct?

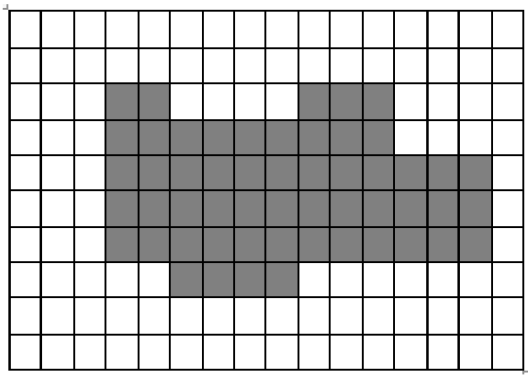
A. Both figures have the same area because both are rectangles.

B. Both figures have the same area because they are made up of the same number of unit squares.

C. The figures have different areas because they have an unequal number of unit squares in their rows.

D. The figures have different areas because they have an unequal number of unit squares in their columns.

2. Study the shaded figure.



What is the area of the shaded figure?

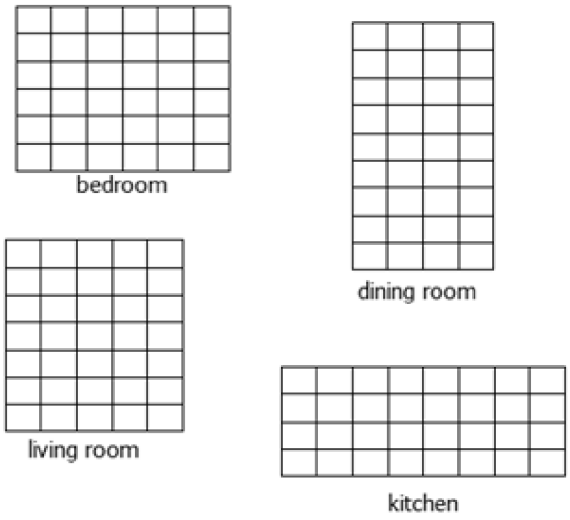
A. 35 square units

B. 38 square units

C. 40 square units

D. 54 square units

3. Zach drew the floor plans for 4 rooms of his house.



Which 2 rooms have the same area?

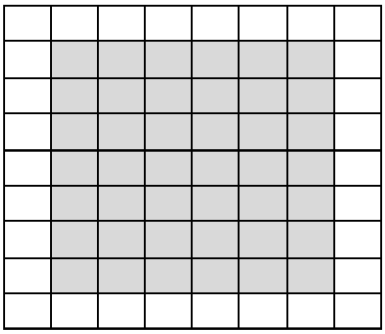
A. bedroom and dining room

B. dining room and kitchen

C. kitchen and living room

D. living room and bedroom

4. Mrs. Cooper put carpet squares in the shaded area of the diagram of her game room.



What is the area of Mrs. Cooper's game room that will have carpet squares?

A. 30 square feet

B. 42 square feet

C. 150 square feet

D. 210 square feet

5. The figure shown is made of 3 connected squares. The side of each square in the diagram measures 4 feet.

What is the perimeter of the figure?

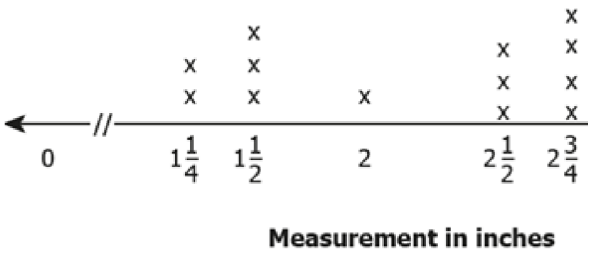
A. 12 feet

B. 24 feet

C. 32 feet

D. 36 feet

6. Alan measured the lengths of different items in his school bag.



Measurement in inches

How many items in Alan's school bag are less than 2 inches in length?

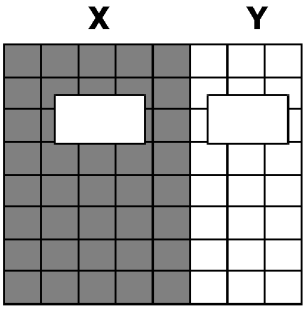
A. 2

B. 3

C. 5

D. 6

7. Timothy found the area of this retangle which is part shaded and part unshaded. He found the area of the shaded part first, and then the area of the unshaded part. Timothy then added both parts together.



Which two multiplication problems represent the shaded and unshaded areas in the rectangle?

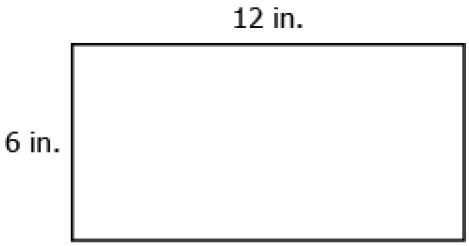
A. Box $X = 5 \times 8$; Box $Y = 3 \times 8$

B. Box $X = 5 \times 7$; Box $Y = 3 \times 7$

C. Box $X = 8 \times 8$; Box $Y = 3 \times 8$

D. Box $X = 5 \times 8$; Box $Y = 8 \times 8$

8. The figure below shows a page of Albert's scrapbook.



He pastes stickers on the entire page without any gaps between two stickers and with no two stickers covering each other. If each sticker is 1in. x 1in., how many stickers can he paste?

A. 2

B. 6

C. 18

D. 72

9. Mike wants to cover the floor of his bedroom with a carpet. The dimensions of the room are 12 feet by 8 feet. What is the area of carpethe shouldbuy?

A. 20 square feet

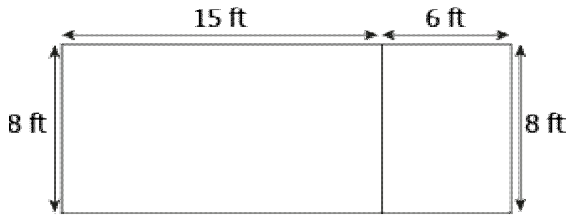
B. 40 square feet

C. 86 square feet

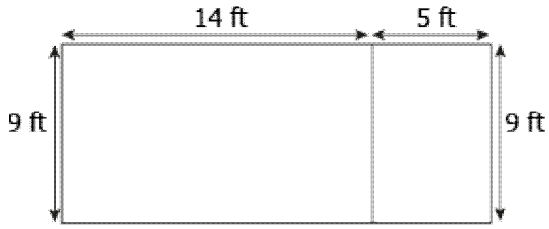
D. 96 square feet

10. The combined area of Nelly's bedroom and the adjoining dressing room is 168 square feet. Which of these figures *best* represents the floor plan of her bedroom and the dressing room?

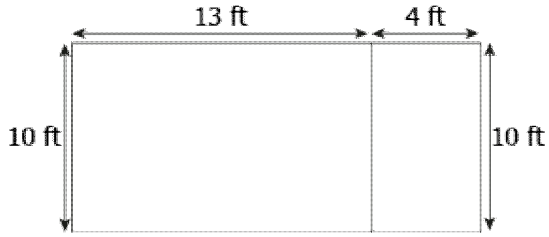
A.



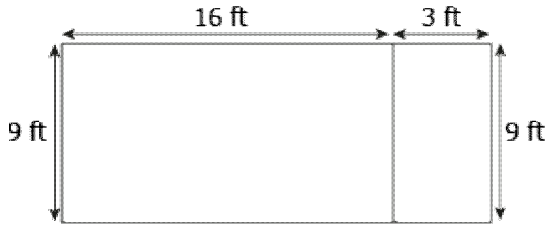
B.



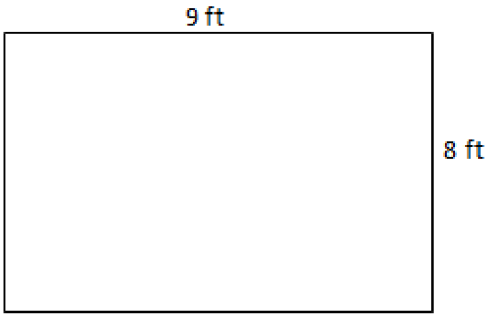
C.



D.



11. Dina has 1 can of paint. One can covers 70 square feet of wall.



Does Dina have enough paint to cover her wall?

A. Yes. 9 times 8 is about 70 square feet.

B. Yes. 9 + 9 + 8 + 8 is only 34 feet.

C. No. 9 x 8 + 9 x 8 is more than 70 square feet.

D. No. 9 times 8 is 72 square feet.

12. Michelle drew 4 different rectangles, each having a perimeter of 24 centimeters.

Which rectangle has the *greatest* area?

A. 2 cm by 10 cm

B. 3 cm by 9 cm

C. 6 cm by 6 cm

D. 7 cm by 5 cm

13. Which formula shown is used to find the area of a rectangle?

A. $a = l \times w$

B. $a = \frac{1}{2} \times l \times w$

C. $a = b \times h$

D. $a = \frac{1}{2} \times b \times h$

14. Using the measurements shown, which triangle has the *smallest* area?

A. Base: 6 in. - Height: 3 in.

B. Base: 7 in. - Height: 4 in.

C. Base: 8 in. - Height: 5 in.

D. Base: 9 in. - Height: 4 in.

15. Using the measurements shown, which triangle has the *largest* area?

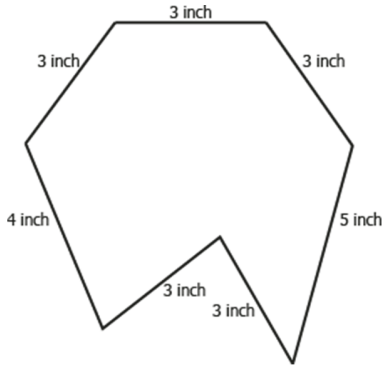
A. Base: 6 in. - Height: 3 in.

B. Base: 7 in. - Height: 4 in.

C. Base: 8 in. - Height: 5 in.

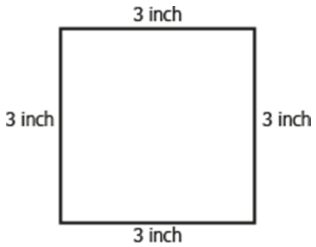
D. Base: 9 in. - Height: 4 in.

16.

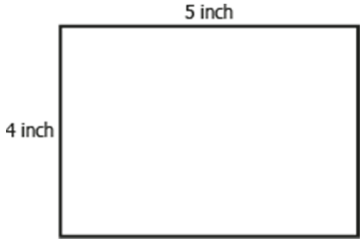


Which of these polygons has the same perimeter as the polygon above?

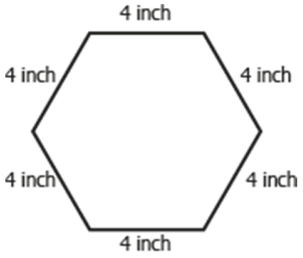
A.



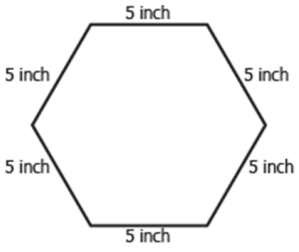
B.



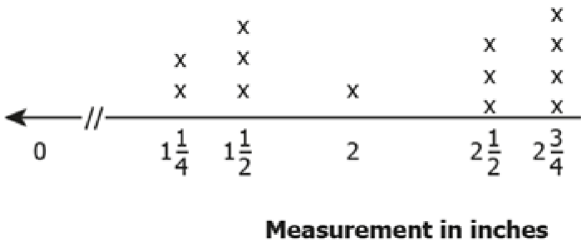
C.



D.



17. Jimmy measured the lengths of the items on his desk.



Measurement in inches

Four items on Jimmy's desk are of the same length. What is the length of each of those four items?

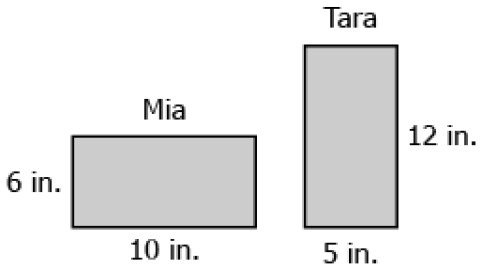
A. $1\frac{1}{2}$ inches

B. $2\frac{1}{2}$ inches

C. $2\frac{3}{4}$ inches

D. $3\frac{1}{4}$ inches

18. Mia and Tara both made the place mats shown as Thanksgiving gifts to give their friends.



Which statement is *true* about the perimeter and area of the place mats?

A. Their perimeters are equal, but the areas are not equal.

B. Their areas are equal, but the perimeters are not equal.

C. Neither their perimeters nor their areas are equal.

D. Both their perimeters and their areas are equal.

19. Sarah drew a rectangle and labeled the lengths of 2 of its sides. She said the perimeter was 22.

Which number sentence shows that Sarah is correct?

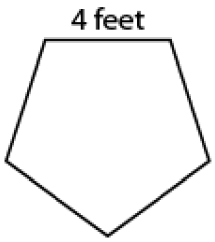
A. 9 + 2 = 11

B. 9 × 2 = 18

C. 9 + 2 + 9 + 2 = 22

D. 9 × 2 × 9 × 2 = 324

20. Anna and Bert built a pentagon shaped play pen for their new puppy. All the sides of the pentagon are the same.



What is the perimeter of the play pen?

A. 4 feet

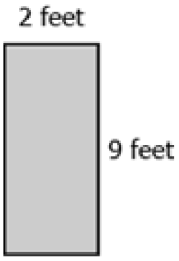
B. 9 feet

C. 16 feet

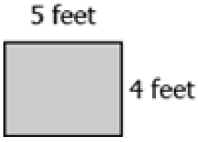
D. 20 feet

21. Mia is preparing her yard for a new rectangular flower bed measuring 6 feet by 3 feet. What shows another way she can lay out her flower bed without changing its perimeter?

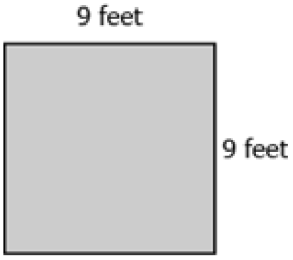
A.



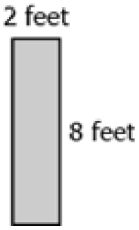
B.



C.

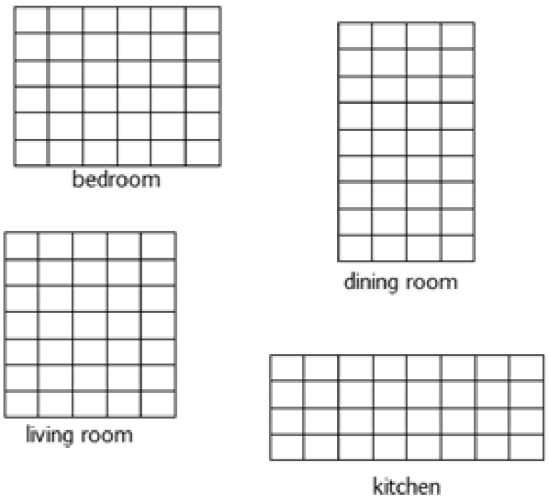


D.



22. Use the diagrams to answer the question.

Elijah placed tile on the floors in 4 rooms in his house.



What is the perimeter of the kitchen?

A. 24 units

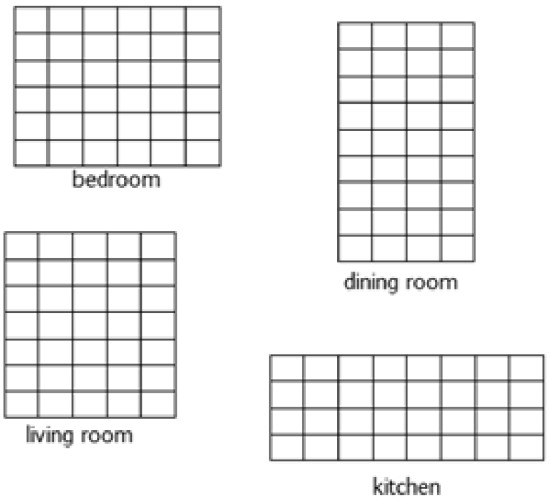
B. 25 units

C. 26 units

D. 27 units

23. Use the diagrams to answer the question.

Elijah placed tile on the floors in 4 rooms in his house.



Which room has the *greatest* perimeter?

A. bedroom

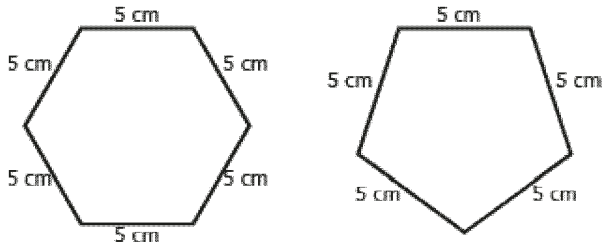
B. dining room

C. kitchen

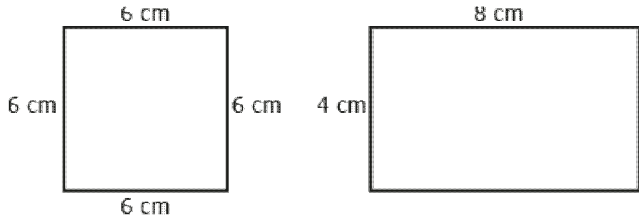
D. living room

24. Which of these pairs of polygons has the same perimeter?

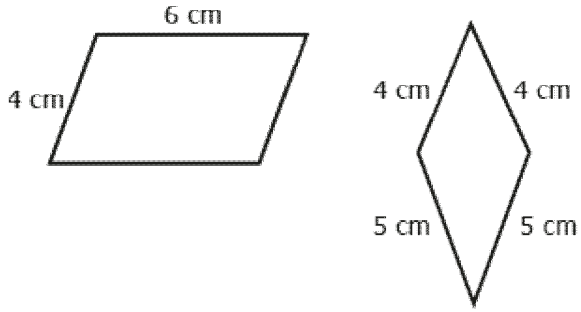
A.



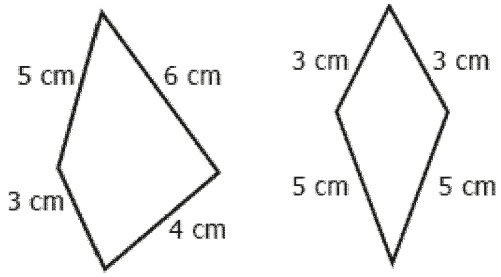
B.



C.

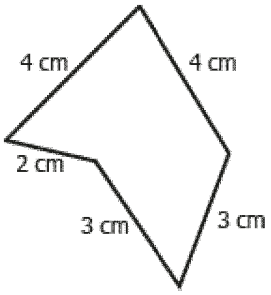


D.

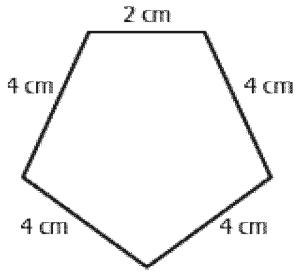


25. Which of these polygons has the perimeter equal to 18 cm?

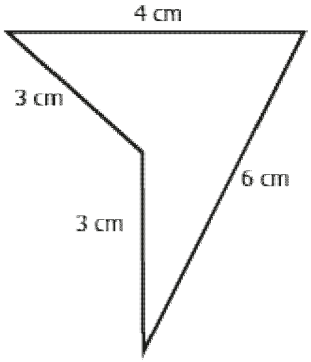
A.



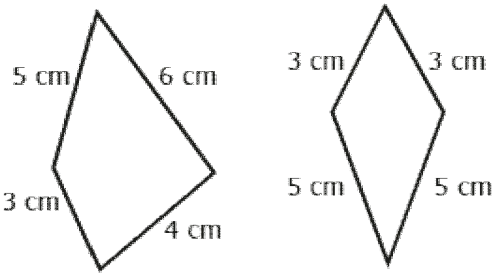
B.



C.



D.



26. The table below shows the number of students in different grades of a school.

Grade	Number of Students
Second	92
Third	100
Fourth	145
Fifth	205

Which grade will show the same number of students when rounded to the nearest ten or hundred?

A. grade 2

B. grade 3

C. grade 4

D. grade 5

27. Tim needs to subtract 417 from 894. Which expression would be *best* for Tim to use to estimate the difference?

A. 800 – 400

B. 800 – 500

C. 900 – 400

D. 900 – 500

28. John has the same number of baseball cards as the number George has rounded to the nearest ten. If John has 150 baseball cards, what could be the number of baseball cards George has?

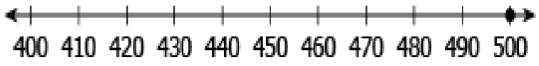
A. 142

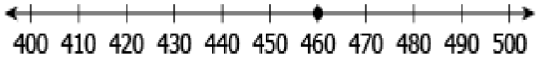
B. 152

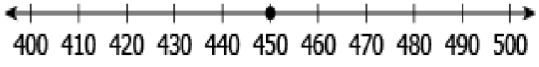
C. 155

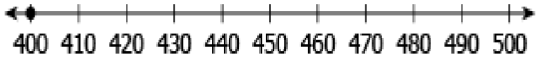
D. 158

29. What number line represents 456 rounded to the nearest hundred?

A. 

B. 

C. 

D. 

30. Trina wants to get an estimate of the total number of pages she has read to the nearest tens place. She needs to add 289 to 808.

Which expression would be *best* for Trina to use to *estimate* the sum?

A. 710 + 290

B. 700 + 300

C. 800 + 300

D. 810 + 290

31. On Friday, 891 people attended the fair. On Saturday, 780 people attended the fair.

About how many more people attended the fair on Friday than on Saturday?

A. 900 people

B. 800 people

C. 200 people

D. 100 people

32. Marco needs to estimate the difference between the costs of two baseball gloves.

Which estimation strategy should Marco use to find the *closest* difference in the cost of the two baseball gloves?

A. Round to $27 and $32, then add.

B. Round to $25 and $31, then add.

C. Round to $27 and $32, then subtract.

D. Round to $25 and $31, then subtract.

33. Rosa needed to subtract 319 tickets from 891 tickets sold for the state fair.

Which expression would be *best* for Rosa to use to estimate the difference?

A. 800 – 300

B. 800 – 400

C. 900 – 300

D. 900 – 400

34. Pete is planning to buy a baseball glove. The baseball glove costs $49. He has saved $21 thus far to purchase the baseball glove.

Which estimate is *closest* to the amount Pete needs to add to his savings to purchase the baseball glove?

A. $15

B. $20

C. $25

D. $30

35. Tina was playing her favorite video game. She played three games and scored 321, 284, and 179.

Which shows the *best* way to estimate Tina's total score for all three games?

A. 400 + 300 + 300 = 1,000

B. 300 + 300 + 300 = 900

C. 300 + 300 + 200 = 800

D. 300 + 200 + 200 = 700

36. There are 4 third grade classes at Southpoint Elementary. There are 27, 22, 28, and 31 students in each class. The principal wants an estimate of the total number of third graders.

Which equation should be used to find the *best* estimate?

A. 30 + 30 + 30 + 30

B. 30 + 20 + 30 + 30

C. 20 + 20 + 30 + 30

D. 20 + 20 + 20 + 30

37. Kevin went bowling with his friends. They bowled three games. Kevin's scores were 219, 193, and 177.

Which shows the *most* accurate way to estimate Kevin's total score for the three games?

A. 200 + 100 + 100 = 400

B. 200 + 200 + 100 = 500

C. 200 + 200 + 200 = 600

D. 300 + 200 + 200 = 700

38. Mrs. Fletcher bought pencils for her children. Nick got 47 blue pencils, and Eliza got 32 red pencils. To estimate the number of pencils she bought, round each number of pencils to the nearest ten. What numbers will be used in the estimate?

A. 40 + 30

B. 40 + 40

C. 50 + 30

D. 50 + 40

39. Round each number in the box to the nearest ten and estimate the sum.

85 + 52 + 64 + 36 = ?

A. 235

B. 240

C. 250

D. 255

40. Mr. Felix had his gym class jog for a total of 39 minutes on Tuesday and a total of 22 minutes on Thursday.

Which number sentence is the *best* estimate of how many more minutes they jogged on Tuesday than on Thursday?

A. 40 + 20 = ___

B. 30 + 20 = ___

C. 30 – 20 = ___

D. 40 – 20 = ___

41. Rosa needs to subtract 219 from 798.

Which expression would be *best* for Rosa to use to estimate the difference?

A. 700 – 200

B. 700 – 300

C. 800 – 200

D. 800 – 300

42. There was a race at an elementary school. 560 people started the race. Only 280 people finished the race.

What is the *best* estimate of how many people did *not* finish the race?

A. 200

B. 250

C. 300

D. 400

43. Antonio is saving money to buy a skateboard. The skateboard costs $82. Antonio has saved $32.

Which estimate is *closest* to the amount Antonio still needs in order to buy the skateboard?

A. $30

B. $50

C. $80

D. $110

44. Teena spent $140 on gas in November. In December, she spent $192 on gas.

What is the *best estimate* for how much more Teena spent on gas in December than November?

A. $50

B. $55

C. $60

D. $65

45. Which number has a 3 in the hundreds place?

A. 2,399

B. 3,297

C. 9,032

D. 9,273

46. What is the value of 7 in this number?

7,248

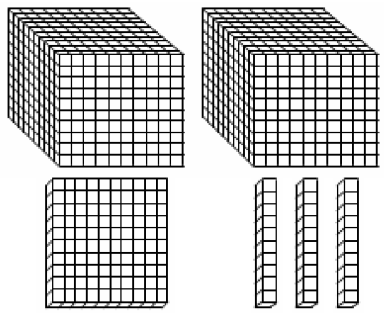
A. seven ones

B. seven tens

C. seven hundreds

D. seven thousands

47. Zoe created a number using base ten blocks.



What is Zoe's number?

A. 213

B. 2,013

C. 2,103

D. 2,130

48. Using rounding, what is the *best* estimate of the sum of these numbers?

28, 37, 45, 56

A. 180

B. 260

C. 150

D. 140

49. What is the value of 7 in the number 3,758?

A. 7

B. 70

C. 700

D. 7,000

#	Answer	Objective
1.	B	Obj : 3.MD.6. Measure areas by counting unit squares ...
2.	D	Obj : 3.MD.6. Measure areas by counting unit squares ... Obj : 3.MD.5. Recognize area as an attribute of plane...
3.	A	Obj : 3.MD.6. Measure areas by counting unit squares ...
4.	B	Obj : 3.MD.6. Measure areas by counting unit squares ...
5.	C	Obj : 3.MD.6. Measure areas by counting unit squares ...
6.	C	Obj : 3.MD.7. Relate area to the operations of multip...
7.	A	Obj : 3.MD.7. Relate area to the operations of multip...
8.	D	Obj : 3.MD.7. Relate area to the operations of multip...
9.	D	Obj : 3.MD.7. Relate area to the operations of multip...
10.	A	Obj : 3.MD.7. Relate area to the operations of multip...
11.	D	Obj : 3.MD.7. Relate area to the operations of multip...
12.	C	Obj : 3.MD.7. Relate area to the operations of multip...
13.	A	Obj : 3.MD.7. Relate area to the operations of multip...
14.	A	Obj : 3.MD.7. Relate area to the operations of multip...
15.	C	Obj : 3.MD.7. Relate area to the operations of multip...
16.	D	Obj : 3.MD.8. Solve real world and mathematical probl...
17.	C	Obj : 3.MD.8. Solve real world and mathematical probl...
18.	B	Obj : 3.MD.8. Solve real world and mathematical probl...
19.	C	Obj : 3.MD.8. Solve real world and mathematical probl...
20.	D	Obj : 3.MD.8. Solve real world and mathematical probl...
21.	B	Obj : 3.MD.8. Solve real world and mathematical probl...
22.	A	Obj : 3.MD.8. Solve real world and mathematical probl...
23.	B	Obj : 3.MD.8. Solve real world and mathematical probl...
24.	B	Obj : 3.MD.8. Solve real world and mathematical probl...
25.	C	Obj : 3.MD.8. Solve real world and mathematical probl...
26.	B	Obj : 3.NBT.1. Use place value understanding to round ...
27.	C	Obj : 3.NBT.1. Use place value understanding to round ...
28.	B	Obj : 3.NBT.1. Use place value understanding to round ...
29.	A	Obj : 3.NBT.1. Use place value understanding to round ...
30.	D	Obj : 3.NBT.1. Use place value understanding to round ...
31.	D	Obj : 3.NBT.1. Use place value understanding to round ...
32.	C	Obj : 3.NBT.1. Use place value understanding to round ...
33.	C	Obj : 3.NBT.1. Use place value understanding to round ...
34.	D	Obj : 3.NBT.1. Use place value understanding to round ...
35.	C	Obj : 3.NBT.1. Use place value understanding to round ...
36.	B	Obj : 3.NBT.1. Use place value understanding to round ...
37.	C	Obj : 3.NBT.1. Use place value understanding to round ...
38.	C	Obj : 3.NBT.1. Use place value understanding to round ...
39.	B	Obj : 3.NBT.1. Use place value understanding to round ...
40.	D	Obj : 3.NBT.1. Use place value understanding to round ...
41.	C	Obj : 3.NBT.1. Use place value understanding to round ...
42.	C	Obj : 3.NBT.1. Use place value understanding to round ...
43.	B	Obj : 3.NBT.1. Use place value understanding to round ...
44.	A	Obj : 3.NBT.1. Use place value understanding to round ...
45.	A	Obj : 3.NBT.1. Use place value understanding to round ...
46.	D	Obj : 3.NBT.1. Use place value understanding to round ...
47.	D	Obj : 3.NBT.1. Use place value understanding to round ...
48.	A	Obj : 3.NBT.1. Use place value understanding to round ...
49.	C	Obj : 3.NBT.1. Use place value understanding to round ...

Objectives Measured:	Items	Questions measuring this objective
Obj : 3.MD.6. Measure areas by counting unit squares ...	5	1, 2, 3, 4, 5
Obj : 3.MD.8. Solve real world and mathematical probl...	10	16, 17, 18, 19, 20, 21, 22, 23, 24, 25
Obj : 3.NBT.1. Use place value understanding to round ...	24	26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49
Obj : 3.MD.5. Recognize area as an attribute of plane...	1	2
Obj : 3.MD.7. Relate area to the operations of multip...	10	6, 7, 8, 9, 10, 11, 12, 13, 14, 15

#	Key	Item ID
1.	B	MC 146500
2.	D	MC 144773
3.	A	MC 144729
4.	B	MC 144711
5.	C	MC 47025
6.	C	MC 152710
7.	A	MC 144857
8.	D	MC 146504
9.	D	MC 142595
10.	A	MC 142592
11.	D	MC 33096
12.	C	MC 37478
13.	A	MC 37453
14.	A	MC 37486
15.	C	MC 37485
16.	D	MC 142715
17.	C	MC 152711
18.	B	MC 146506
19.	C	MC 144670
20.	D	MC 146508
21.	B	MC 146505
22.	A	MC 144142
23.	B	MC 144141
24.	B	MC 142716

#	Key	Item ID
25.	C	MC 142714
26.	B	MC 146512
27.	C	MC 144683
28.	B	MC 146511
29.	A	MC 146509
30.	D	MC 144717
31.	D	MC 144833
32.	C	MC 144645
33.	C	MC 144111
34.	D	MC 144067
35.	C	MC 142740
36.	B	MC 141748
37.	C	MC 47051
38.	C	MC 119755
39.	B	MC 119762
40.	D	MC 119686
41.	C	MC 50303
42.	C	MC 50215
43.	B	MC 46983
44.	A	MC 46969
45.	A	MC 34629
46.	D	MC 37212
47.	D	MC 37201
48.	A	MC 37003
49.	C	MC 34560