COASTMETRO
ELEMENTARY MATH PROJECT

GRADE 6 PRACTICE QUESTIONS

DECIMALS

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

1. Use front-end estimation to find the approximate value of each product. Then, indicate if your estimate is the same, an overestimate, or an underestimate of the exact product. Explain your thinking.

a. 28. 2 x 5

b. 41.6 x 7

c. 59.9 x 4

d. 73.5 x 3

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

2. Use front-end estimation to place each decimal point. Explain your thinking.

a. 3.12 x 6 = 1872

b. 15. 486 x 5 = 7743

c. 8.7 x 3 = 261

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

3. Use the number line and benchmark decimals below to find the approximate value of each product. Then, indicate if your estimate is the same, an overestimate, or an underestimate of the exact product. Explain your thinking using words, pictures and symbols.

a. 0.3 x 3 =

b. 0.45 x 4 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

4. Use compatible numbers to find the approximate value of each product. Then, indicate if your estimate is the same, an overestimate, or an underestimate of the exact product. Explain your thinking.

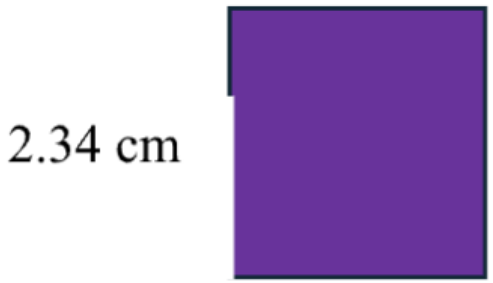
a. 5.48 x 7

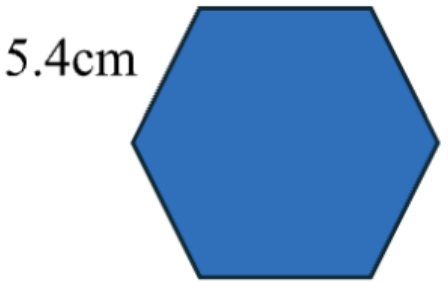
b. 6.893 x 4.2

c. 374.271 x 0.6

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

5. Estimate the perimeter of each polygon. Show your thinking.





GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

6. Estimate the side length of a pentagon with a perimeter of 58.8cm.

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

7. Is 8.45 x 5 greater than, or less than, 40? How can you estimate to find out?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

8. Place the decimal in the product. Justify your thinking.

5.43 x 6	344.9 x 4.3
3258	148307
Place the Decimal...Justify!	Place the Decimal...Justify!

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

9. How can you use repeated addition to multiply 365.78 by 4?

Represent your thinking using words, pictures, and symbols.

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

10. Use repeated addition to multiply the following:

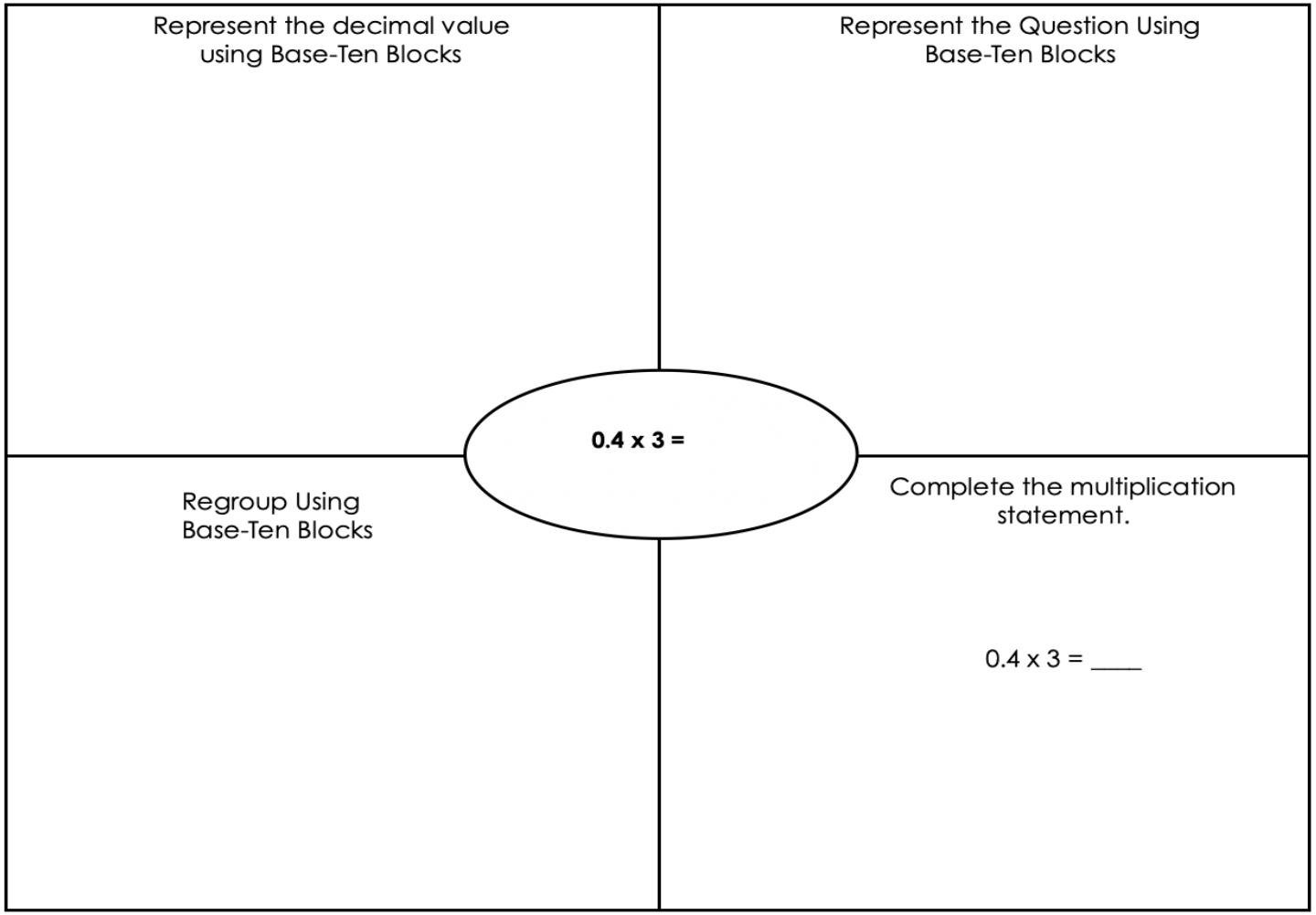
a. 7.896 x 5 =

b. 0.4012 x 3 =

c. 591. 3 x 9 =

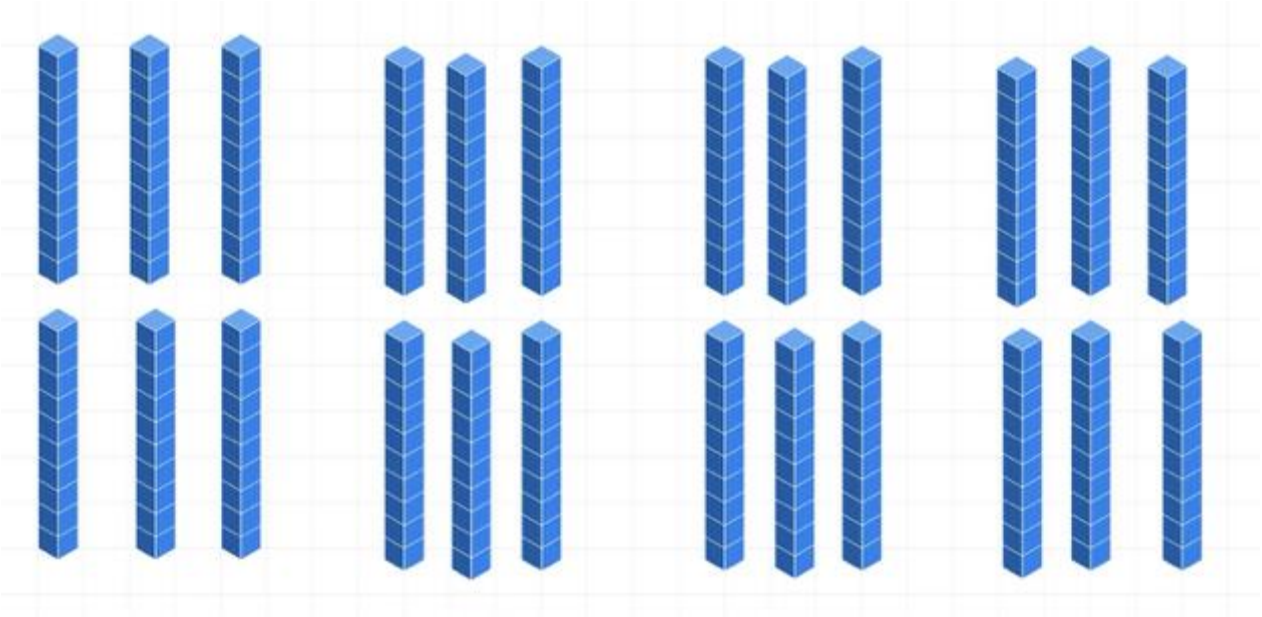
GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

11.



GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

12. Find the product using base-ten blocks. What multiplication statement represents the model?



GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

13. Use base-ten blocks to multiply. Use pictures and symbols to show your thinking.

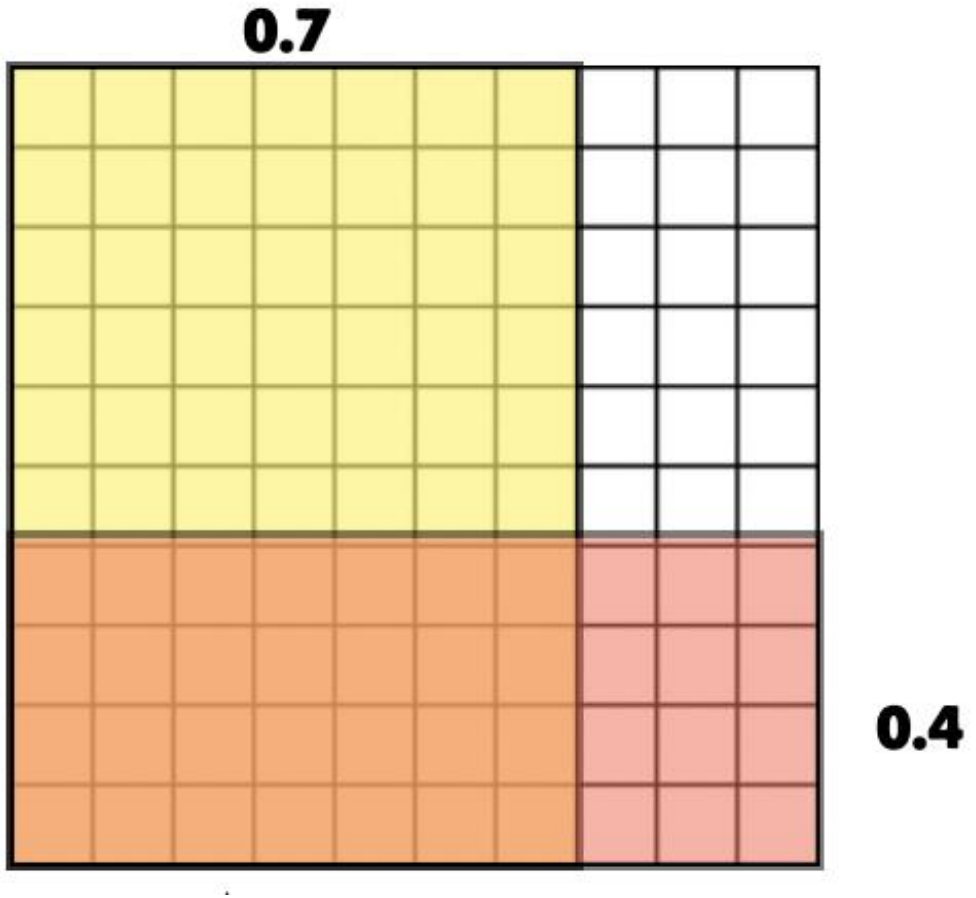
a. 0.8 x 5 =

b. 2.3 x 4 =

c. 3.96 x 3 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

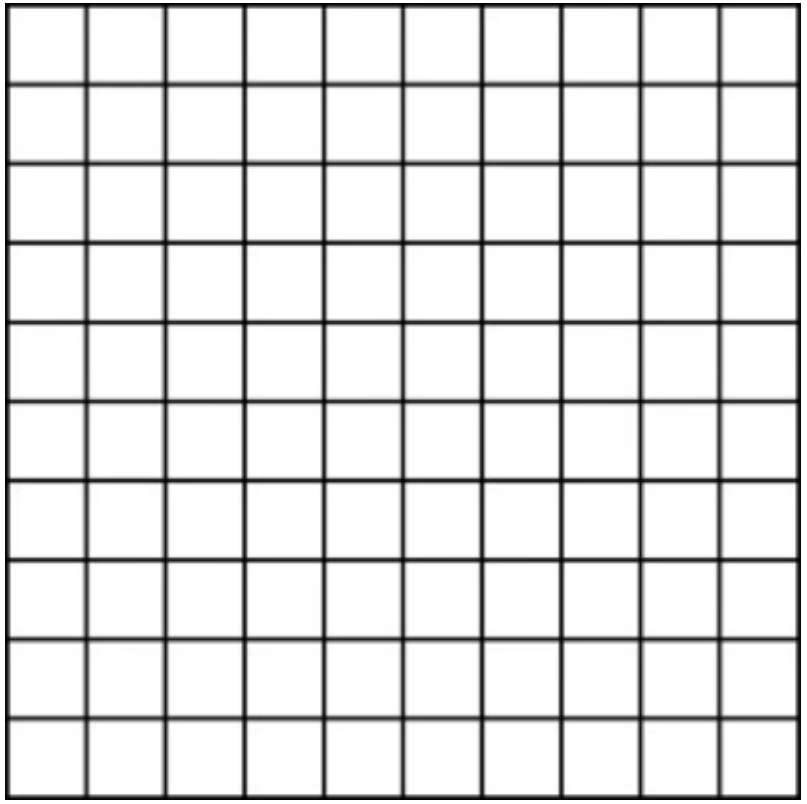
14. Write a multiplication statement to represent the model below.



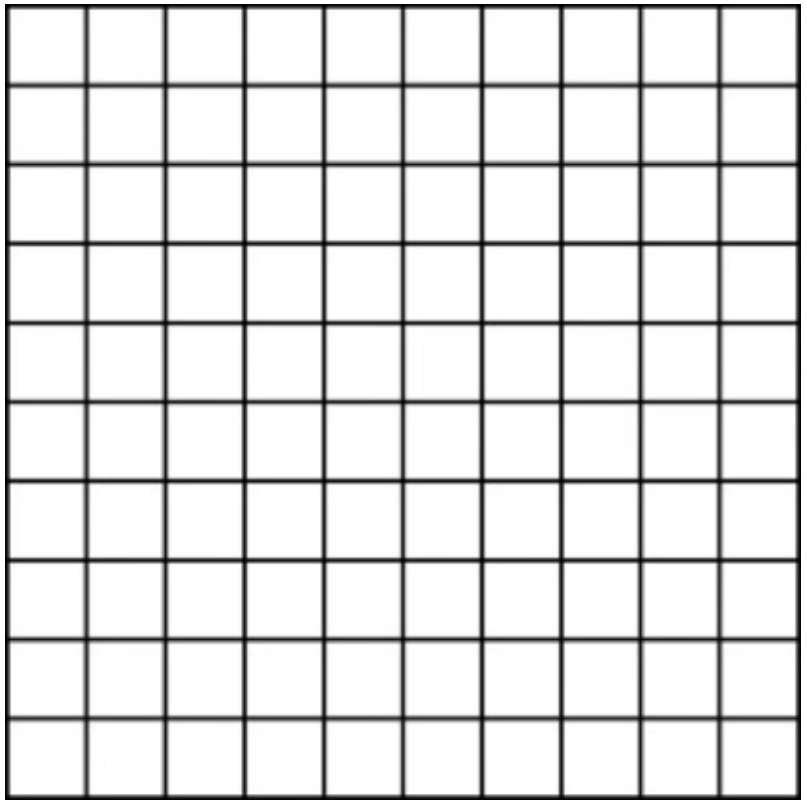
GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

15. Use the grid below to find the product.

a. 0.4 x 0.9 =



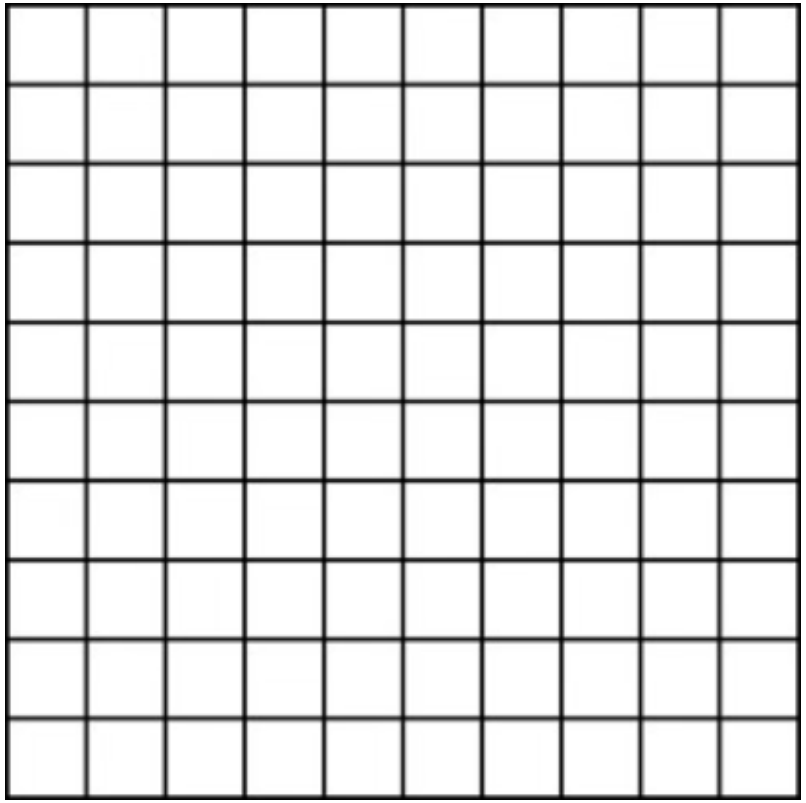
b. 0.8 x 0.6 =



GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

15. Use the grid below to find the product.

c. 0.3 x 0.5 =

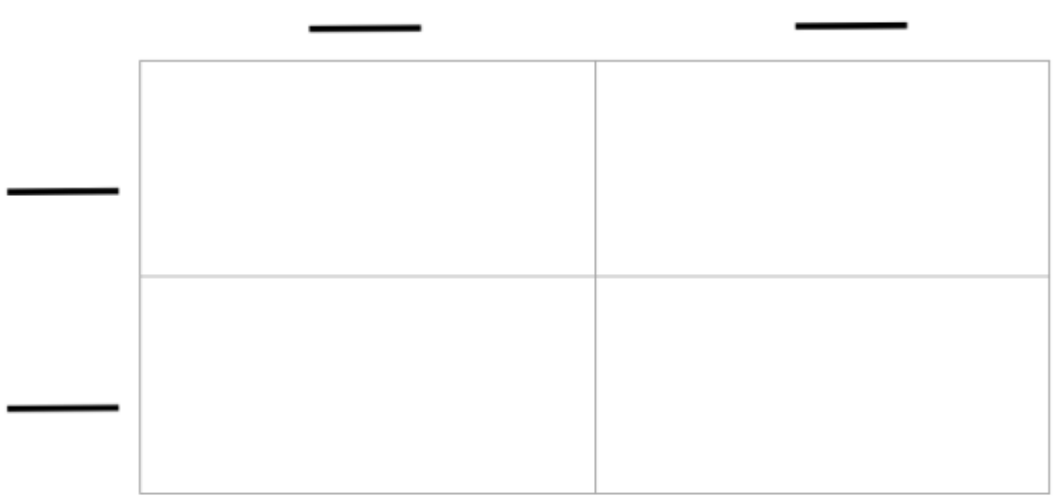


GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

16.

Multiplying Decimals Using Area Models

Complete the area model to find the product of 30.5 x 5.3.



Sum of Products

Multiplication Statement

____ x ____ = ____

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

16.

Complete the area model to find the product of 12.52 x 13.91.

Sum of Products

Multiplication Statement

____ x ____ = ____

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

17. Use an area model to multiple. Use pictures and symbols to show your thinking.

a. 2.8 x 6 =

b. 4.125 x 5 =

c. 582.37 x 14 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: MULTIPLICATION

18. Use place value and reordering (standard algorithm strategy) to find the product.

a. 148.73 x 5 =

b 0.125 x 0. 368 =

c. 0.456 x 1.789 =

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

19. Max weighs 107 pounds. On mercury she would weigh 0.36 times that amount. How much would she weigh on Mercury?

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

20.There are 400 mangoes in a barrel. Each mango weighs 0.75 pounds. What is the total weight of the mangoes in the barrel.

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

21. George bought 12 tickets for him and his friends to see his favourite band in concert at a cost of $125.50 per ticket. What is the total cost of all 12 tickets?

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

22. The Grade 6 class is selling reusable water bottles for $4.75 each. They sold 36 bottles in the first week and 24 bottles in the second week. How much money did they raise in total over the two weeks?

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

23. A bag of apples weighs 1.25 kg. A shopper buys 4.5 bags. If each kilogram of apples costs $3.20, how much will the shopper pay in total?

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

24. Each paintbrush costs $2.39. A teacher buys 15 paintbrushes and 8 palettes that cost $3.75 each. What is the total cost of all the art supplies?

GRADE 6 DECIMALS:
OPEN QUESTIONS: MULTIPLICATION

25. A special consisting of a sandwich, soup and juice cost $14.80. If you paid for 5 of these meals, how much change should you get back from a 100-dollar bill?

Anoop paid a total of $51.83, before taxes, for a cap and three pens. If the cap cost $36.98, how much did each pen cost?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

1. Use front-end estimation to find the approximate value of each quotient. Then, indicate if your estimate is the same, an overestimate, or an underestimate of the exact product. Explain your thinking.

a. 55.3 ÷ 5 =

b. 44.7 ÷ 7 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

2. The decimal point is missing in each quotient. Use estimation to place each decimal point. Explain your thinking.

a. 8.2 ÷ 2 = 41

b. 11.919 ÷ 9 = 1324

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

3. Estimate (use either rounding, front-end estimation, or compatible numbers), then divide using repeated subtraction.

a. 2.8 ÷ 4 =

b. 5.25 ÷ 5 =

c. 8.1 ÷ 3 =

d. 64.3 ÷ 8 =

e. 79.8 ÷ 5 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

4. Estimate (use either rounding, front-end estimation, or compatible numbers), then divide using repeated subtraction.

a. 2.8 ÷ 4 =

b. 5.25 ÷ 5 =

c. 8.1 ÷ 3 =

d. 64.3 ÷ 8 =

e. 79.8 ÷ 5 =

f. 18.4 ÷ 8 =

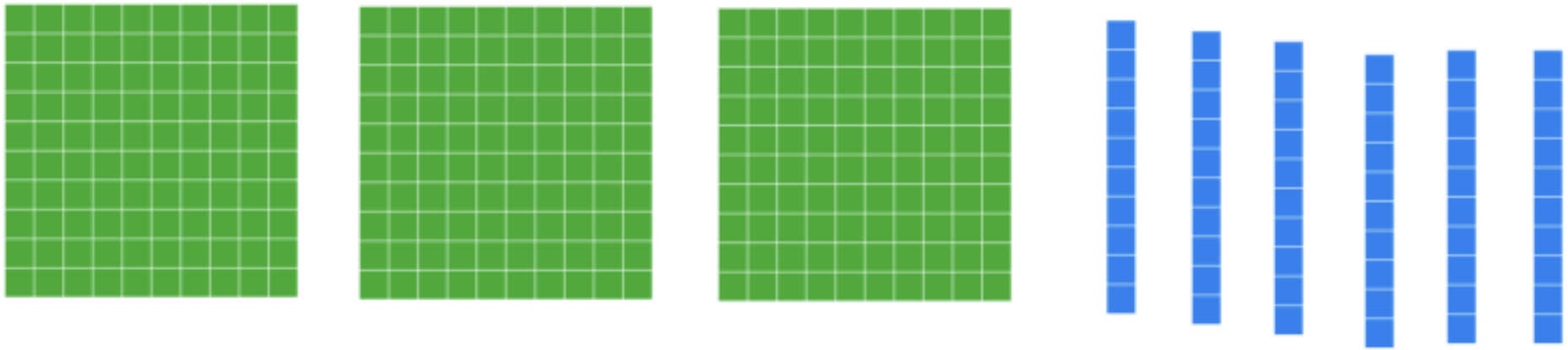
g. 220.15 ÷ 7 =

h. 71.5 ÷ 6.5 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

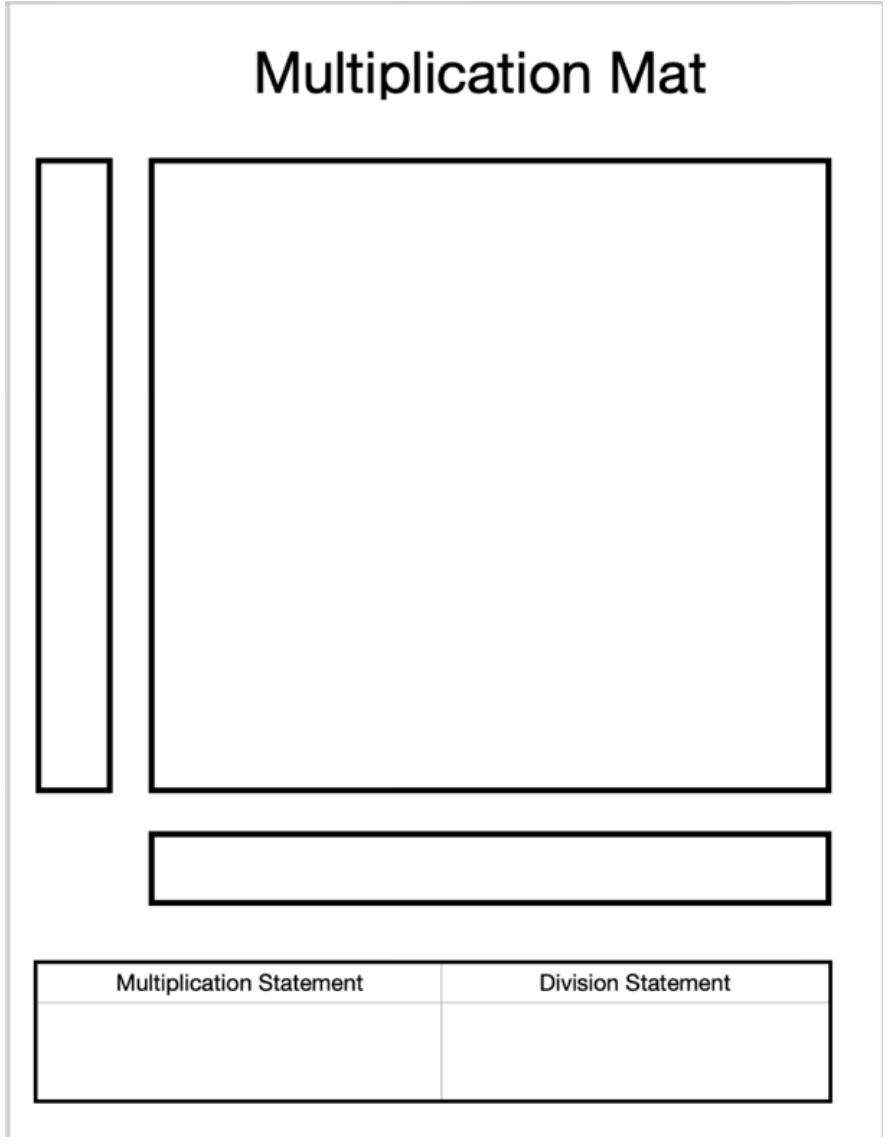
5. Use base-ten blocks to find the quotient. The first step has been completed for you. Continue by showing the remaining steps needed to solve this division problem.

$3.9 \div 6 = ?$



GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

6. Use the multiplication mat and base-ten blocks to divide 6.4 by 4.



GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

7.Use base-ten blocks to divide. Show your thinking using pictures and symbols.

a. 36.8 ÷ 8 =

b. 12.66 ÷ 6 =

c. 425.7 ÷ 9 =

d. 1.68 ÷ 3 =

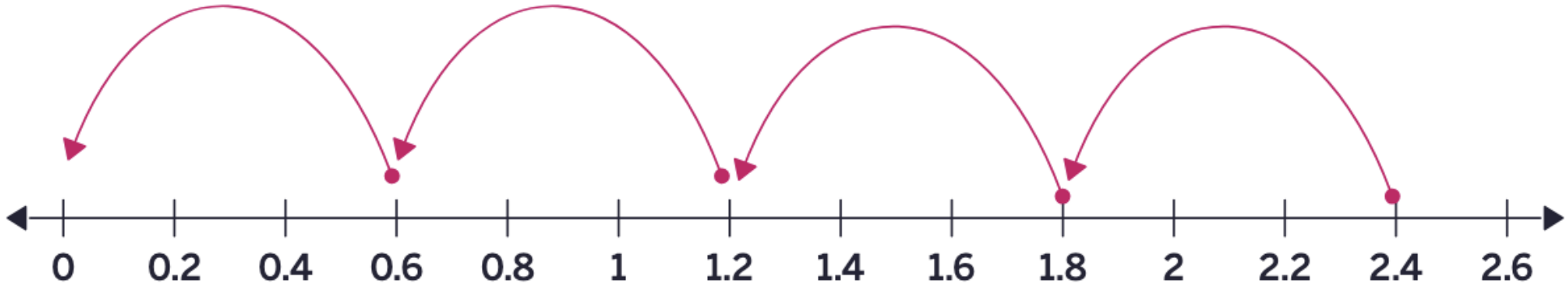
GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

8. The decimal point in the quotient is in the wrong place. Identify the mistake, then write the quotient with the decimal point in the correct place.

15.805÷ 5 = 316.1

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

9. What division statement can be written to represent the model below?



GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

10. A student solved 24.6 ÷ 0.6 using partial quotients. Review their work below and circle the one mistake they made and describe the error. Then, determine the correct quotient using partial quotients.

Student Work:

Step 1: $0.6 \times 40 = 24$

$24.6 - 24 = 0.4$

Step 2: $0.4 < 0.6$, so no more groups can be made

Step 3: Final Answer: 40 remainder 0.4

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

11. Use the standard algorithm strategy (standard step-by-step long division process) to divide.

a. 9.3 ÷ 6 =	b. 11.68 ÷ 9 =
c. 0.142 ÷ 8 =	d. 240 ÷ 0.8 =
e. 75 ÷ 0.6 =	f. 13.5 ÷ 1.5 =

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

12. How many quarters are in $14.75?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

13. How many nickels are in 36.25?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

14. Jim cut a wooden stick which was 33.6cm long into 3 equal pieces. How long was each piece?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

15. I am a number between 1 and 10. When you multiply me by 7, I have a product of 47.6. What number am I?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

16. Five tins of soup cost $4.45. How much would three tins cost?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

17. Mr. Tierny purchased a new TV set for $5284.20. If he paid for it in 12 equal monthly payments, how much did he pay each month?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

18. Three oranges cost the same as two apples. If six apples cost $4.05, how much would one orange cost?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

19. Joanne worked 5 hours each weekday for two weeks. If she was paid a rate of $13.50 per hour, how much would she have earned at the end of two weeks?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

20. A triangular park has a perimeter of 11. 4 km. How long is each side of the triangle?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

21. Alice plans a weekly food budget of $45.60. She wants to spend 0.75 of that on groceries and the rest on dining out.

a. How much will she spend on groceries?

b. How much remains for dining out?

22. A family's monthly utility budget is $95.40. They discover that they can reduce usage by 12% by changing habits.

a. By how many dollars will their bill decrease?

b. What will the new bill be?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

23. A ride-sharing app charges $18.45 for a trip, split equally among 4 friends. How much does each friend owe?

GRADE 6 DECIMALS:
CLOSED QUESTIONS: DIVISION

24. A printer cartridge lasts for 375 pages and costs $24.99. What's the cost per page?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

25. How can you model 16.8 ÷ 12 using base-ten blocks? What is the quotient?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

26. Estimate a solution and record it. Then, show at least 3 different ways to solve each question. Use pictures, words, numbers and/or symbols to represent your thinking.

a. 3.29 x 200 =

b. 4.573 ÷ 5 =

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

27. Use both the long-division algorithm and an area-model diagram to divide 60.84 by 4. Then, answer:

a. What steps or ideas are the same in both methods?

b. What steps or ideas are different?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

28. Would you rather multiply 3.5 by 4 or divide 35 by 0.4? Explain your choice and your strategy for solving.

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

29. Make up two different decimal multiplication problems that have the same answer as 0.8 × 5. How do you know the answers are equal?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

30. Which one doesn't belong? Justify your thinking using math.

2×1.6	$4 \div 0.5$
3.2×1	$16 \div 5$

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

31. You have 2.5 meters of ribbon. You want to cut it into equal pieces. What are possible ways you could divide it to get whole number or decimal lengths? How do you know?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

32. Create a math story that could be solved by multiplying two decimals and a math story that could be solved by dividing a decimal by a whole number. Show two ways to solve one of your stories.

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

33. How can you use partial quotients to divide 7.2 by 3?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

34. You multiply two decimal numbers and the answer is slightly less than 7. What might they be?

GRADE 6 DECIMALS:
OPEN QUESTIONS: DIVISION

35. Choose a value for the jump size and point A so that this picture shows division with a decimal(s). What division does it show? Notice that the jump to 0 is a different size from all the others.