

Word Problems

11 division questions to develop reasoning and problem solving skills

Grade 5

Questions

| Name: | Date: |
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Davina is helping her uncle prepare for a family party. She is putting 204 pieces of chocolate in bags for the 12 people that are coming. If each person gets the same amount of chocolates, how many should Davina put in the bags?

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2 Idris was solving the following equations with a calculator:

$$6,000 \div 100 = 60$$

$$17,000 \div 100 = 170$$

$$900,000 \div 100 = 9,000$$

What pattern does Idris' equations show? Explain.

| | Answe |
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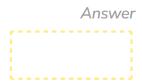
Dotty the dog's steps are 90cm long.

Jules the dog's steps are 45cm long.

If their owners take them on a 2.7km walk, how many strides does each dog do?



4 Doug buys 12 cartons of eggs for \$10.92. How much does each carton cost?

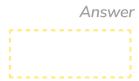


5 Solve the following equations.

6 Each box has 35 straws. There are 1,960 straws left to be packed into boxes. How many full boxes will the straws make?

Answer

7 Carson is preparing an experiment and needs to put 0.8 milliliters of a powder into each small cup. If Carson has 9.35 milliliters of powder, how many small cups can be filled?



8 Kiran solved 4,700 ÷ 49

$$4,500 \div 50 = 90$$

$$200 \div 50 = 4$$

94 groups of 50 is 94 groups of 49 + 94 extra and 94 - 49 = 45.

94 groups + 45 groups = 139, so $4,700 \div 49 = 139$.

Explain Kiran's strategy and correct any mistakes made.

Answer

| 9 | It takes Zaleya 28 minutes to make 1 bracelet. Zaleya has 3.5 hours of free |
|---|---|
| | time this week she will use to make bracelets. How many bracelets can she |
| | make? |

Answer

10 Ruben solves 8,904 ÷ 29 = 451. Is Ruben's answer reasonable? Why or why not?

Answer

Challenge Question!

Mario owns a pizza restaurant. He tells his 14 staff that they can share any of the tips that they are given equally over the month to the nearest dollar. Any money left over is added to the next month's tips. In February \$762 were collected in tips.

| a | How much tip money did each of the staff receive in February? | Answer |
|------|---|--------|
| | | |
| b | How much was left to add to March? | |
| | | Answer |
| | | |
| In N | March, they had an extra member of staff and collected \$855. | |
| С | How much did each of the staff receive? | |
| | | Answer |
| | | |
| d | How much was left to add to April? | |
| | | Answer |
| | | |
| | | |

Answers

| Question number | Question | Answers | Standard |
|--------------------|--|---|-----------------------|
| 1 | Davina is helping her uncle prepare for a family party. She is putting 204 pieces of chocolate in bags for the 12 people that are coming. If each person gets the same amount of chocolates, how many should Davina put in the bags? | 17 *solved with place value understanding, properties of operations or models | 5.NBT.B.6 |
| 2 | Idris was solving the following equations with a calculator: $6,000 \div 100 = 60$ $17,000 \div 100 = 170$ $900,000 \div 100 = 9,000$ What pattern does Idris' equations show? Explain. | The patterns show that dividing by 100 makes the place value two times smaller. This is because each place value is 10 times less than the one to the left. | 5.NBT.A.2 |
| 3 | Dotty the dog's steps are 90cm long. Jules the dog's steps are 45cm long. If their owners take them on a 2.7km walk, how many strides does each dog do? | Dotty = 3,000 strides; Jules = 6,000 strides, *solved with place value understanding, properties of operations or models | 5.NBT.B.6 5.MD.A.1 |
| 4 | Doug buys 12 cartons of eggs for \$10.92. How much does each carton cost? | \$0.91 *solved with place value understanding, properties of operations or models | 5.NBT.B.7 |
| 5 | Solve the following equations. a) $45 \div 10 =$ b) $67 \div 10 =$ c) $11 \div 10 =$ | a) $45 \div 10 = 4.5$ b) $67 \div 10 = 6.7$ c) $11 \div 10 = 1.1$ | 5.NBT.A.2 |

| Question number | Question | Answers | Standard |
|--------------------|---|--|-----------------------|
| 6 | Each box has 35 straws. There are 1,960 straws left to be packed into boxes. How many full boxes will the straws make? | 56 *solved with place value understanding, properties of operations or models | 5.NBT.B.6 |
| 7 | Carson is preparing an experiment and needs to put 0.8 milliliters of a powder into each small cup. If Carson has 9.35 milliliters of powder, how many small cups can be filled? | 11 *solved with place value understanding, properties of operations or models | 5.NBT.B.7 |
| 8 | Kiran solved $4,700 \div 49$. $4,500 \div 50 = 90$ $200 \div 50 = 4$ 94 groups of 50 is 94 groups of $49 + 94$ extra and $94 - 49$ = 45. 94 groups $+ 45$ groups $= 139$, so $4,700 \div 49 = 139$. Explain Kiran's strategy and correct any mistakes made. | Kiran used groups of 50, because it's easier to divide. This leaves 1 extra in each group, so Kiran also divided the extra 94. 94 has 1 group of 49 with 45 left over, so the answer should be 94 + 1 = 95 R 45. | 5.NBT.B.6 |
| 9 | It takes Zaleya 28 minutes to make 1 bracelet. Zaleya has 3.5 hours of free time this week she will use to make bracelets. How many bracelets can she make? | 7 *solved with place value understanding, properties of operations or models | 5.NBT.B.6 5.MD.A.1 |
| 10 | Ruben solves 8,904 ÷ 29 = 451. Is Ruben's answer reasonable? Why or why not? | No, you can estimate with 9,000 ÷ 30 = 300. The answer should be around 300 and 451 is too large. *Answers may vary but should show understanding of division | 5.NBT.B.6 |

| Question number | Question | Answers | Standard |
|-----------------------|--|---|-----------|
| Challenge Question | Mario owns a pizza restaurant. He tells his 14 staff that they can share any of the tips that they are given equally over the month to the nearest dollar. Any money left over is added to the next month's tips. In February \$762 were collected in tips. a) How much tip money did each of the staff receive in February? b) How much was left to add to March? In March, they had an extra member of staff and collected \$855. c) How much did each of the staff receive? d) How much was left to add to April? | a) \$756 of total shared out. Each person received \$54 to the nearest dollar. b) \$46 was carried over to March. c) End of March \$46 is added to March total which gives \$901. This gives each person (now 15 staff not 14) \$60 to the nearest dollar. d) \$1 was left to be carried over to April. | 5.NBT.B.7 |

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