THIRD SPACE LEARNING

Word Problems

11 multiplication questions to develop reasoning and problem solving skills

Grade 3

Questions

Name: ..... Date: .....

1 What numbers could be written in the boxes to make these equations correct?
There could be more than one solution to each missing number calculation.
Write your answer in the boxes below.

a ☐ x ☐ = 18

b ☐ x ☐ = 24

c ☐ x ☐ = 16

d ☐ x ☐ = 40

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2 Tamsin is thinking of two numbers.
They have a product of 24. The sum of the two numbers is 10.
Can you work out what numbers Tamsin is thinking of?

Answer

☐

3 a Using the digits 2, 4 and 5 can you create a multiplication calculation that gives an answer as near to 100 as possible?
You can only use each digit once. Place each digit in the boxes below.
Write their product after the = sign.

[ ] [ ] x [ ] = _____

b Can you use the digits 2, 3 and 6 to get an answer as near to 100 as possible?

[ ] [ ] x [ ] = _____

c Can you use the digits 2, 3 and 4 to get an answer as near to 100 as possible?

[ ] [ ] x [ ] = _____

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4 Sara has bought 64 sunflowers for a party. She wants to arrange them in vases.

a How many vases would she need to use if she put 8 sunflowers in each vase? [ ]

b How many vases would she need to use if she put 4 sunflowers in each vase? [ ]

c How many vases would she need to use if she put 3 sunflowers in each vase? [ ]

5 Tommy buys 12 chocolate bars. Each chocolate bar comes in pieces of 8.
There are 100 children in 3rd Grade
Will there be enough chocolate pieces to give one piece to each child?
Show how you worked it out.

Answer

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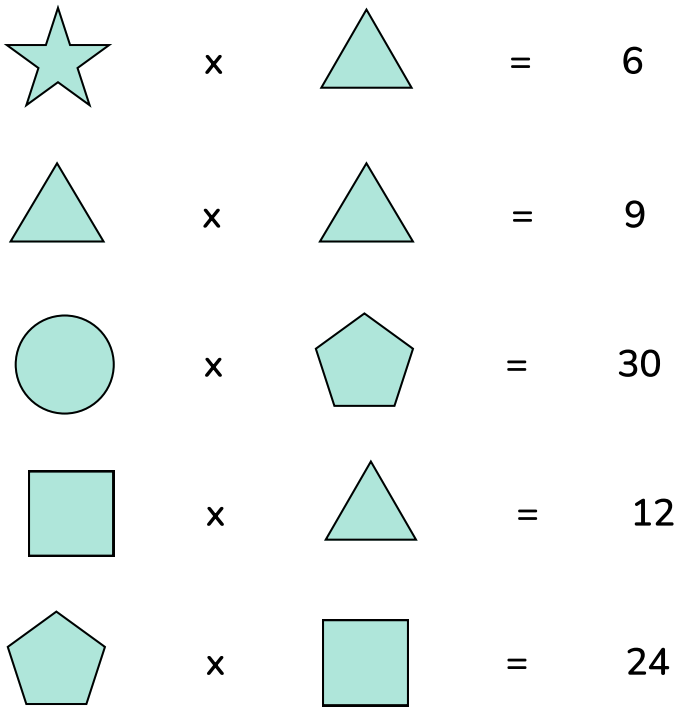
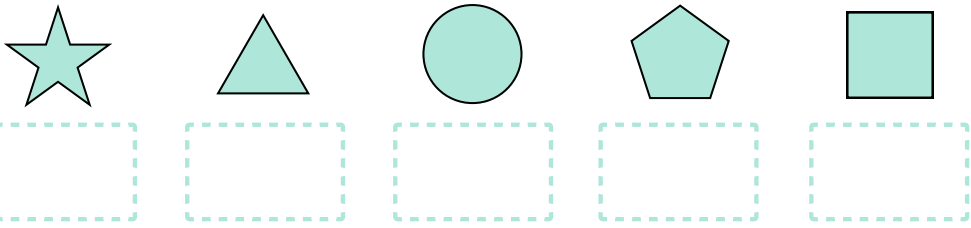
6 Each of the shapes in the calculations below represent a different number (2, 3, 4, 5 or 6).
Each shape represents the same number in every calculation, for example  would equal 1 in every calculation it was used.



Work out which number each shape represents.



7 Complete the multiplication grid below by writing the missing numbers in the empty boxes.

x	3		6	
	6			14
5		20		
	24			56
9				63

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8 Peter bakes six trays of cupcakes. He bakes them in trays of 6 or 12.
He bakes between 45 and 50 cupcakes.

a What combination of trays of 6 and 12 could Peter have used to do this?

Answer

b Later in the day, he eats 6 cupcakes and he sells 24 at the school fair.
How many does he have left?

Answer

9 Maria had 3 dice with digits 1-9 on them.
She rolled the 3 dice and multiplied the numbers together.
Her answer was 24.

a What were the three numbers on Maria's dice?

Answer

b Maria rolled her dice again but this time she got the answer 64.
What could her numbers have been this time?

Answer

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10 Milly had a pack of strawberries. In the pack she had between 30 and 50 strawberries.

When she counted them in 3s she had 1 left over.
When she counted them in 4s she had 2 left over.
When she counted them in 5s she had 4 left over.

How many strawberries did Milly have in her pack? Use your 3, 4 and 5 times tables to find out.

Answer

Challenge Question!

There are some different magical creatures in an enchanted forest.
Each different creature has a different number of legs.

A monopod has 1 leg.
A pixie has 2 legs.
A unicorn has 4 legs.
A spider has 8 legs.

Maisie can see 83 legs altogether in the enchanted forest.

a What combination of magical creatures could be in the enchanted forest?

Answer

b Can you find more than one possible combination of magical creatures that could be in the forest?

Answer

Answers

Question number	Question	Answers	Standard
1	What numbers could be written in the boxes to make these equations correct? There could be more than one solution to each missing number calculation. Write your answer in the boxes below. a) ? x ? = 18 b) ? x ? = 24 c) ? x ? = 16 d) ? x ? = 40	a) Possible multiplications to make 18: 1 × 18 OR 2 × 9 OR 3 × 6 b) Possible multiplications to make 24: 1 × 24 OR 2 × 12 Or 3 × 8 OR 4 × 6 c) Possible multiplications to make 16: 1 × 16 OR 2 × 8 OR 4 × 4 d) Possible multiplications to make 40: 1 × 40 OR 2 × 20 OR 4 × 10 OR 5 × 8	3.OA.C.7
2	Tamsin is thinking of two numbers. They have a product of 24. The sum of the two numbers is 10. Can you work out what numbers Tamsin is thinking of?	Tamsin is thinking of 6 and 4.	3.OA.C.7
3	a) Using the digits 2, 4 and 5 can you create a multiplication calculation that gives an answer as near to 100 as possible? You can only use each digit once. Place each digit in the boxes below. Write their product after the equals (=) sign. b) Can you use the digits 2, 3 and 6 to get an answer as near to 100 as possible? c) Can you use the digits 2, 3 and 4 to get an answer as near to 100 as possible?	a) 25 × 4 = 100 (the closest) Pupils may also have made the following multiplication sentences: 24 × 5 = 120, 25 × 4 = 100, 42 × 5 = 210, 45 × 2 = 90 b) 26 × 3 = 78 (the closest) Pupils may also have made the following multiplication sentences: 23 × 6 = 138, 32 × 6 = 192, 36 × 2 = 72, 63 × 2 = 126 c) 23 × 4 = 92 (the closest) Pupils may also have made the following multiplication sentences: 24 × 3 = 72, 34 × 2 = 68, 43 × 2 = 86	3.OA.C.7

Question number	Question	Answers	Standard
4	Sara has bought 64 sunflowers for a party. She wants to arrange them in vases. a) How many vases would she need to use if she put 8 sunflowers in each vase? b) How many vases would she need to use if she put 4 sunflowers in each vase? c) How many vases would she need to use if she put 3 sunflowers in each vase?	a) 8 vases. b) 16 vases. c) 21 with one left over or 22 vases with 1 sunflower in the last vase.	3.OA.B.5
5	Tommy buys 12 chocolate bars. Each chocolate bar comes in pieces of 8. There are 100 children in 3rd Grade. Will there be enough chocolate pieces to give one piece to each child? Show how you worked it out.	No because 12 × 8 = 96 meaning he would be 4 short.	3.OA.C.7
6	Each of the shapes in the calculations below represent a different number (2, 3, 4, 5 or 6). Each shape represents the same number in every calculation, for example (heart) would equal 1 in every calculation it was used. (star) x (triangle) = 6 (triangle) x (triangle) = 9 (circle) x (pentagon) = 30 (square) x (triangle) = 12 (pentagon) x (square) = 24 Work out which number each shape represents.	Star = 2, Triangle = 3, Square = 4, Circle = 5, Pentagon = 6	3.OA.C.7

Question number	Question	Answers	Standard
7	Complete the multiplication grid below by writing the missing numbers in the empty boxes.	<table><tr><td>×</td><td>3</td><td>**4**</td><td>6</td><td>**7**</td></tr><tr><td>**2**</td><td>6</td><td>**8**</td><td>**12**</td><td>14</td></tr><tr><td>5</td><td>**15**</td><td>20</td><td>**30**</td><td>**35**</td></tr><tr><td>**8**</td><td>24</td><td>**32**</td><td>**48**</td><td>56</td></tr><tr><td>9</td><td>**27**</td><td>**36**</td><td>**54**</td><td>63</td></tr></table>	3.OA.C.7
8	Peter bakes six trays of cupcakes. He bakes them in trays of 6 or 12. He bakes between 45 and 50 cupcakes. a) What combination of trays of 6 and 12 could Peter have used to do this? b) Later in the day, he eats 6 cupcakes and he sells 24 at the school fair. How many does he have left?	a) All possible combinations to make 48 cupcakes: (12) × 4 OR (12) × 3 + (6) × 2 OR (12) × 2 + (6) × 4 OR (12) × 1 + (6) × 6 b) Peter would have 18 cupcakes left. (6 + 24 = 30, 48 – 30 = 18)	3.OA.D.8
9	Maria had 3 dice with digits 1-9 on them. She rolled the 3 dice and multiplied the numbers together. Her answer was 24. a) What were the three numbers on Maria's dice? b) Maria rolled her dice again but this time she got the answer 64. What could her numbers have been this time?	a) All possible combinations: 2, 3 and 4 OR 1, 4 and 6 OR 1, 3 and 8 OR 2, 2 and 6 b) All possible combinations: 4, 4 and 4 OR 1, 8 and 8 OR 2, 4 and 8	3.OA.C.7

Question number	Question	Answers	Standard
10	Milly had a pack of strawberries. In the pack she had between 30 and 50 strawberries. When she counted them in 3s she had 1 left over. When she counted them in 4s she had 2 left over. When she counted them in 5s she had 4 left over. How many strawberries did Milly have in her pack? Use your 3, 4 and 5 times tables to find out.	Milly had 34 strawberries in her pack. If you count in 3s, get up to 33 leaving 1. If you count in 4s, get up to 32 leaving 2. If you count in 5s, get up to 30 leaving 4.	3.OA.C.7 3.OA.D.8
Challenge Question	There are some different magical creatures in an enchanted forest. Each different creature has a different number of legs. A monopod has 1 leg. A pixie has 2 legs. A unicorn has 4 legs. A spider has 8 legs. Maisie can see 83 legs altogether in the enchanted forest. a) What combination of magical creatures could be in the enchanted forest? b) Can you find more than one possible combination of magical creatures that could be in the forest?	Any combination of legs when multiplied and then added together = 83 For example, 5 spiders = 5 × 8 = 40 10 unicorns = 10 × 4 = 40 1 pixie = 1 × 2 = 2 1 monopod = 1 × 1 = 1 Total: 83	3.OA.D.8

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- Scaffolded learning to close gaps

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thirdspacelearning.com/us/

+1 929-298-4593

hello@thirdspacelearning.com

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