

Problem Solving and Mathematical Language

Estimation

Guess Check and Adjust

An expression is part of a number story.

$15 \times 7 = 85$ is a number story.

85 is a mathematical expression

$$15 \times 7 = 85$$

15 x 7 is a mathematical expression

The **sum** of 8 and 7 is 15

$$8 + 7 = 15$$

To find the sum we add.

The **product** of 5 and 7 is 35

$$5 \times 7 = 35$$

To find the quotient we multiply.

15 and 5 has a **difference** of 10

$$15 - 5 = 10$$

To find the difference we take.

We can also count on to find the difference.

$$5 + \underline{\quad} = 15$$

$5 + 10 = 15$ so the difference of 15 and 5 is 10

The **quotient** of 15 and 5 is 3

$$15 \div 5 = 3$$

To find the quotient we divide.

What is the product of 3 and 6

What is the quotient of 12 and 3

What is the sum of 15 and 20

18 and 7 has a difference of

What is the product of 20 and 5

What is the quotient of 24 and 2

What is the sum of 17 and 21

18 and 21 has a difference of

Which expression has a value between 800 and 900?

To solve, we may need to round and estimate.

a/ 58×11

$$58 \times 10 = 580$$

or

$$60 \times 11 = 660$$



b/ 518×2

$$520 \times 2$$

$$500 \times 2 = 1000$$

$$20 \times 2 = 40$$

$$520 \times 2 = 1040$$



c/ $1400 \div 70$

$$14 \div 7 = 2$$

$$140 \div 7 = 20$$

$$140 \div 70 = 2$$

$$1400 \div 70 = 20$$



d/ $4805 \div 6$

$$4800 \div 6$$

$$6 \times 8 = 48$$

$$6 \times 80 = 480$$

$$6 \times 800 = 4800$$

$$4800 \div 6 = 800$$



Mark the correct answer with an x

Estimate to determine which expression has a value between 500 and 600

Show your thinking in the boxes below.

Mark the correct answer with a X

a/ 12×59

b/ 820×2

c/ $2520 \div 5$

d/ $1600 \div 40$

Mark the correct answer with an x

Estimate to determine which expression has a value closest to 600

Show your thinking in the boxes below.

Mark the correct answer with a X

a/ 12×29

b/ $2505 \div 4$

c/ 250×3

d/ $2400 \div 60$

Solve by Estimating

James has 149 Pokemon cards. He has them in bags. There are between 28 and 32 cards in each bag.

How many bags of Pokemon cards does he have?

3 4 5

$150 \div 3 = 50$

$160 \div 4 = 40$

$150 \div 5 = 30$

Solve Using Guess Check and Adjust

James has 149 Pokemon cards. He has them in bags. There are between 28 and 32 cards in each bag.

How many bags of Pokemon cards does he have?

3 4 5

$3 \times 50 = 1$

$3 \times 49 = 147$

$147 \div 3 = 49$

$4 \times 30 = 120$

$4 \times 35 = 140$

$4 \times 36 = 144$

$4 \times 37 = 148$

$5 \times 30 = 150$

$5 \times 29 = 145$

29 and 30 are between 28 and 32 so he must have 5 bags

There are 97 chairs in the hall. They are arranged them in rows. There are between 18 and 24 chairs in each row.

How many rows of chairs must there be

3 4 5

Show your thinking.

James has 142 Pokemon cards. He has them in bags. There are between 35 and 40 cards in each bag.

How many bags of Pokemon cards does he have?

3 4 5

Show your thinking.

There are 167 children in a school. There are between 30 and 35 children in each class.

How many classes are there ?

5

6

7

Show your thinking.