

Multiples of 10, 100 and 1000

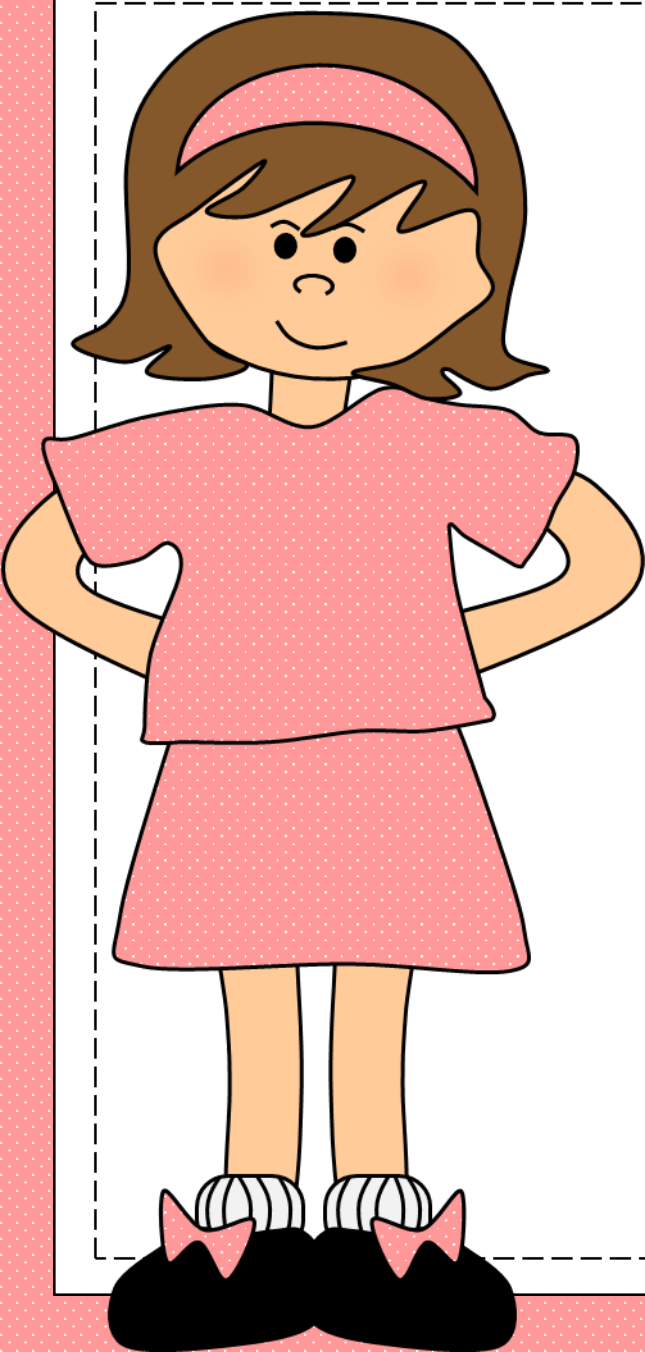
Year 5 – Number – multiplication and division

$$25 \times 5 = 125$$

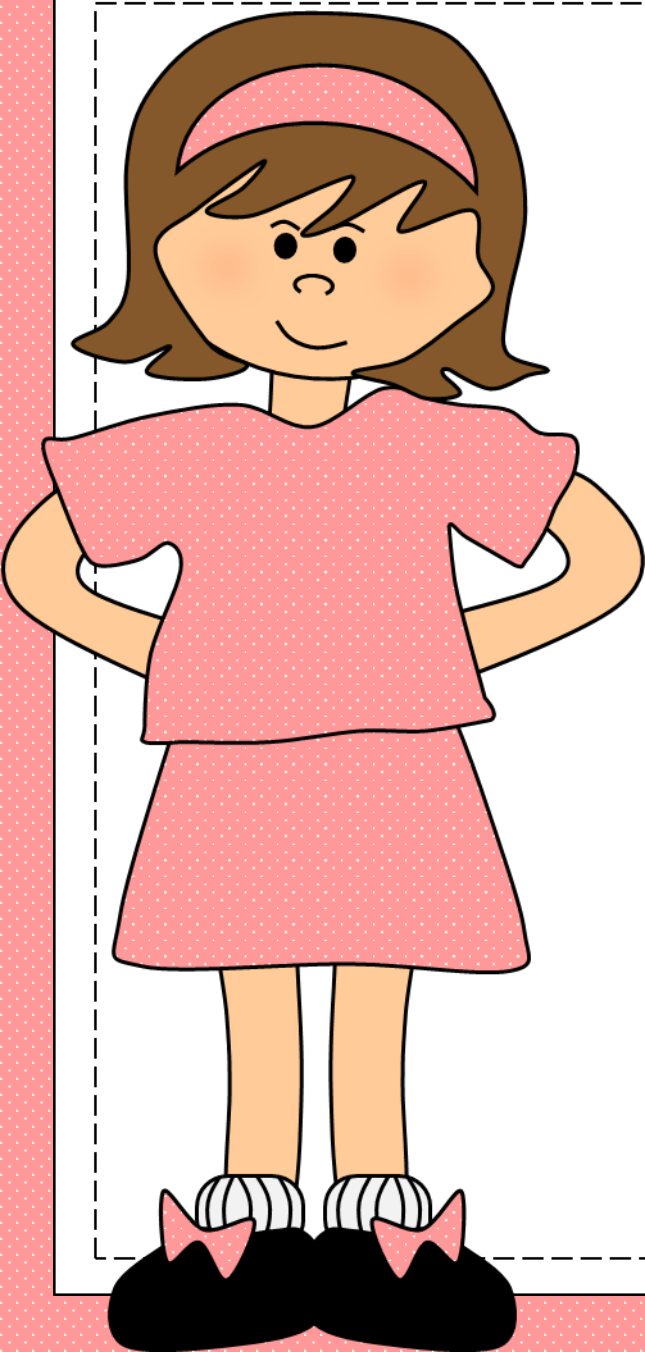
$$25 \times 50 = 1,250$$

$$25 \times 500 = 12,500$$

$$25 \times 5000 = 125,000$$



We can use our
knowledge of
multiplying and
dividing by **10**, **100**
and **1000** to help
solve related
calculations...



Here are 2 methods to solve the calculation

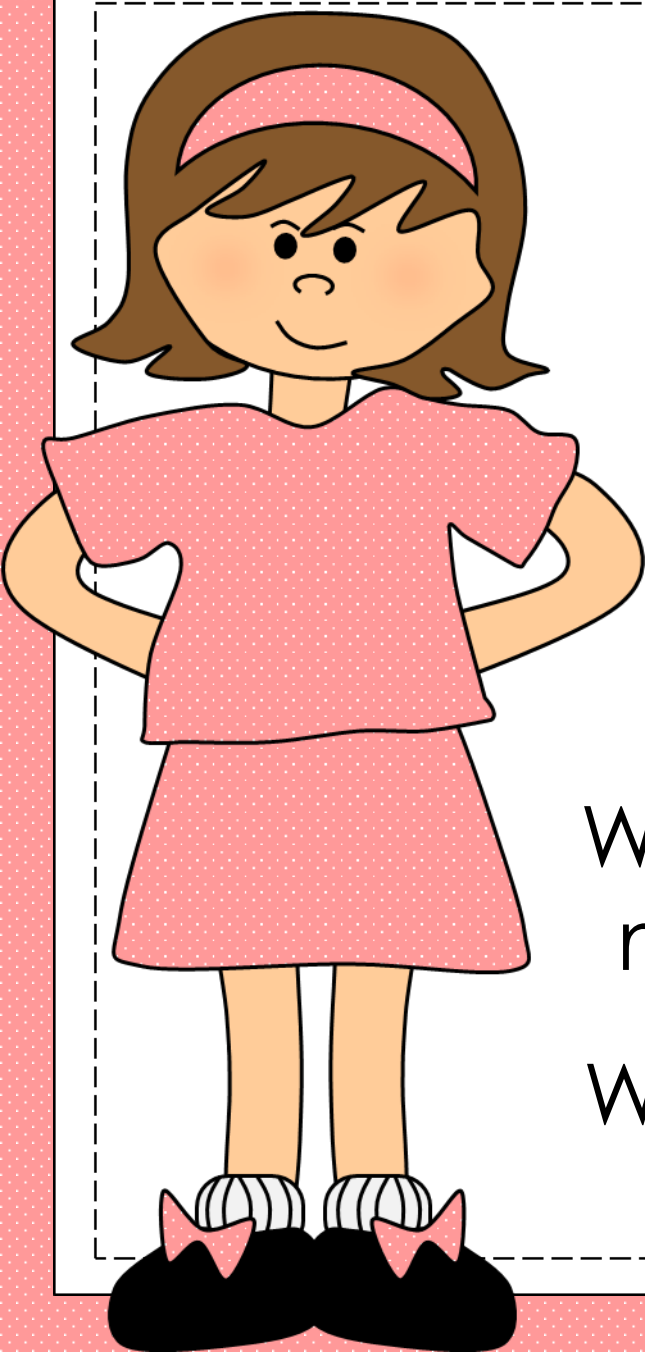
$$12 \times 30 =$$

Method 1:

$$12 \times 3 \text{ (x 10)} =$$
$$36 \times 10 = 360$$

Method 2:

$$12 \times 10 \text{ (x 3)} =$$
$$120 \times 3 = 360$$



$$12 \times 30 =$$

Method 1:

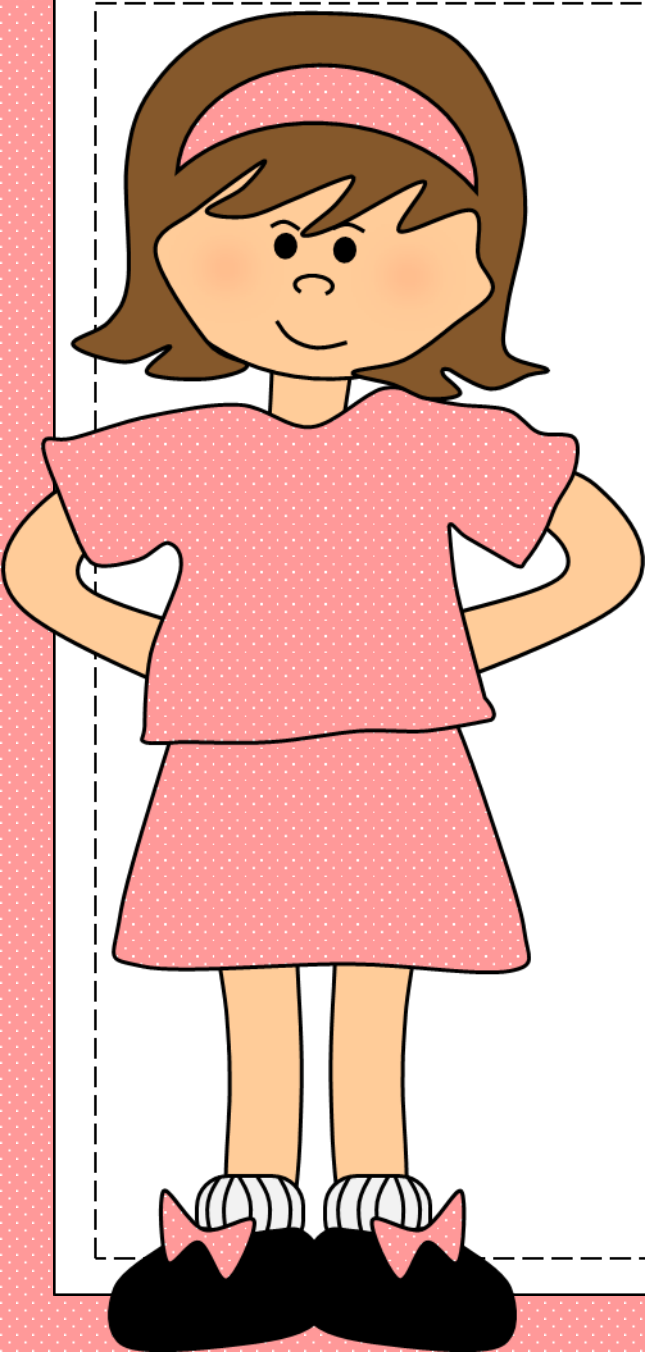
$$12 \times 3 \text{ (x 10)} =$$
$$36 \times 10 = 360$$

Method 2:

$$12 \times 10 \text{ (x 3)} =$$
$$120 \times 3 = 360$$

What is the **same** about the methods, what is **different**?

Which method do you think is the **easiest** to use?



Solve the
calculations
on the
following
slides.

$$15 \times 20 =$$

$$15 \times 2 (\times 10) =$$

$$30 \times 10 = 300$$

$$9 \times 800 =$$

$$9 \times 8 (\times 100) =$$

$$72 \times 100 = 7,200$$

$$12 \times 4000 =$$

$$12 \times 4 (\times 1000) =$$

$$48 \times 1000 = 48,000$$

Use the multiplication fact $32 \times 4 = 128$ to solve the related calculations below.

$$32 \times 40 = \underline{1,280}$$

$$320 \times 4 = \underline{1,280}$$

$$400 \times 32 = \underline{12,800}$$

$$320 \times 400 = \underline{128,000}$$

Here is a method to solve
the calculation

$$2,400 \div 300 =$$

Method :

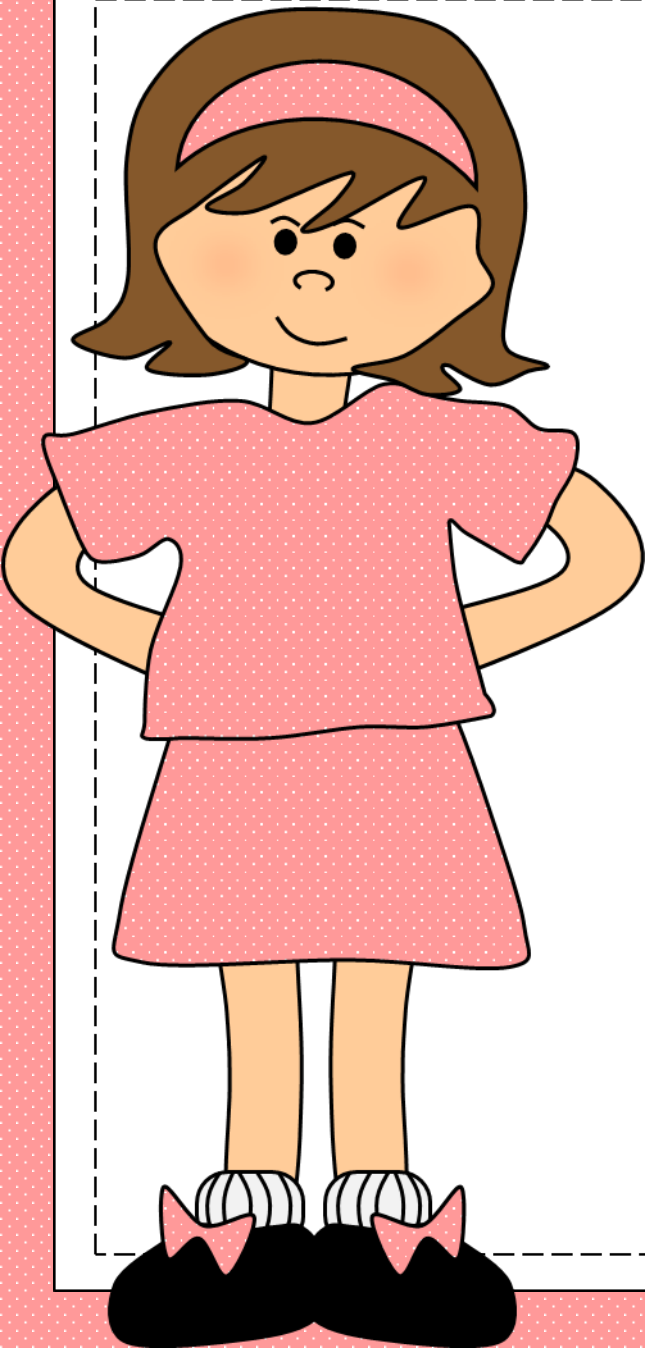
2,400

24

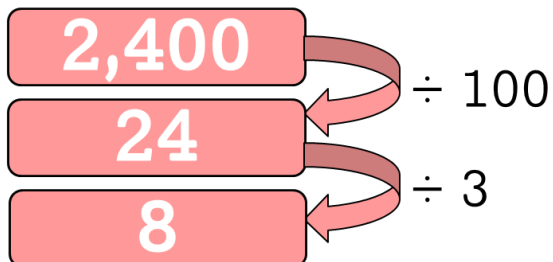
8

$\div 100$

$\div 3$



Method :



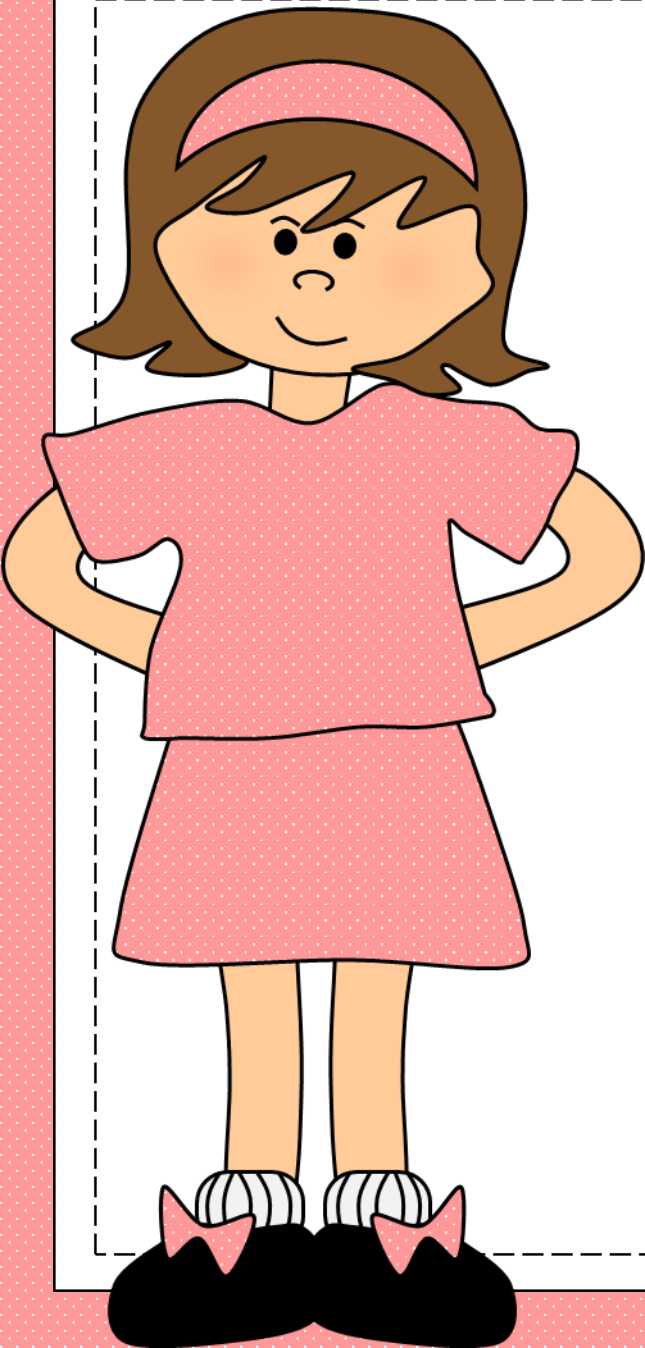
Use this method to help solve the calculations below.

$$4,600 \div 200 = \underline{\hspace{2cm} 23 \hspace{2cm}}$$

$$18,000 \div 200 = \underline{\hspace{2cm} 90 \hspace{2cm}}$$

$$6,400 \div \underline{\hspace{2cm} 800 \hspace{2cm}} = 8$$

$$\underline{\hspace{2cm} 7 \hspace{2cm}} = 2,800 \div 400$$



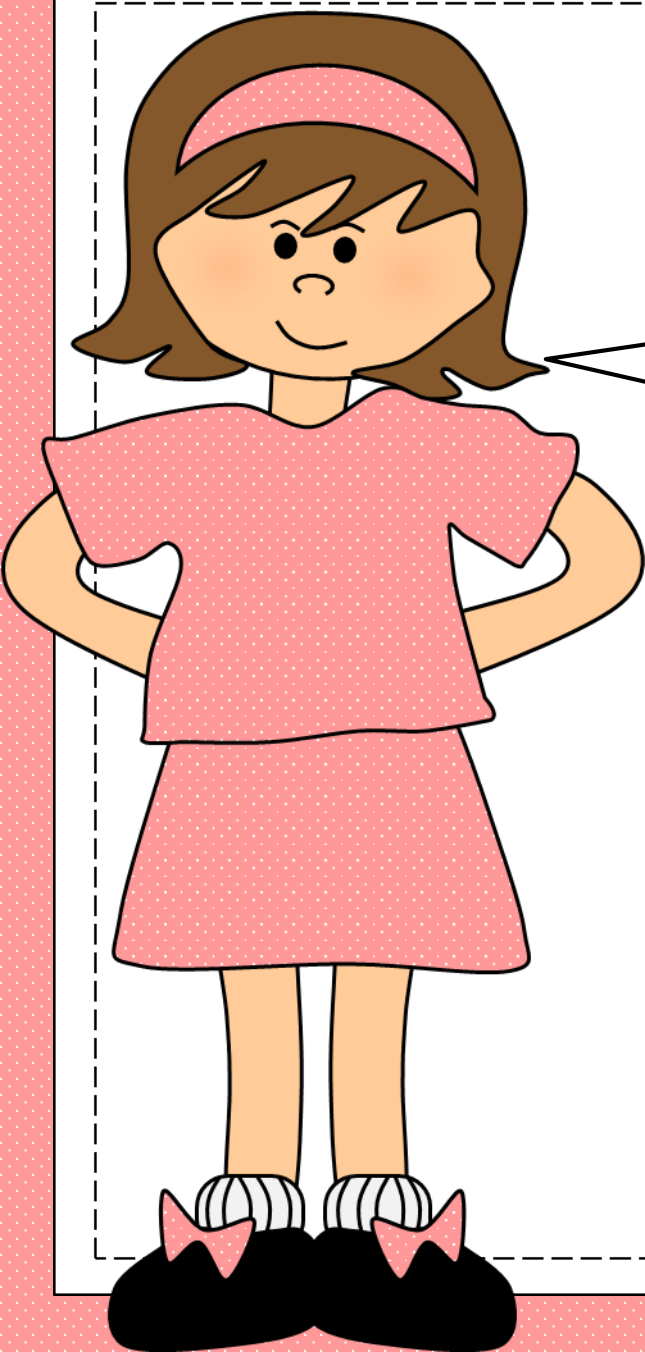
Answer the
questions on
the following
slides.

Click here

Draw lines to match the answers to the questions.

4×40	$16,000$
40×400	16
4×4	160

5×120	$60,000$
120×50	600
500×120	$6,000$

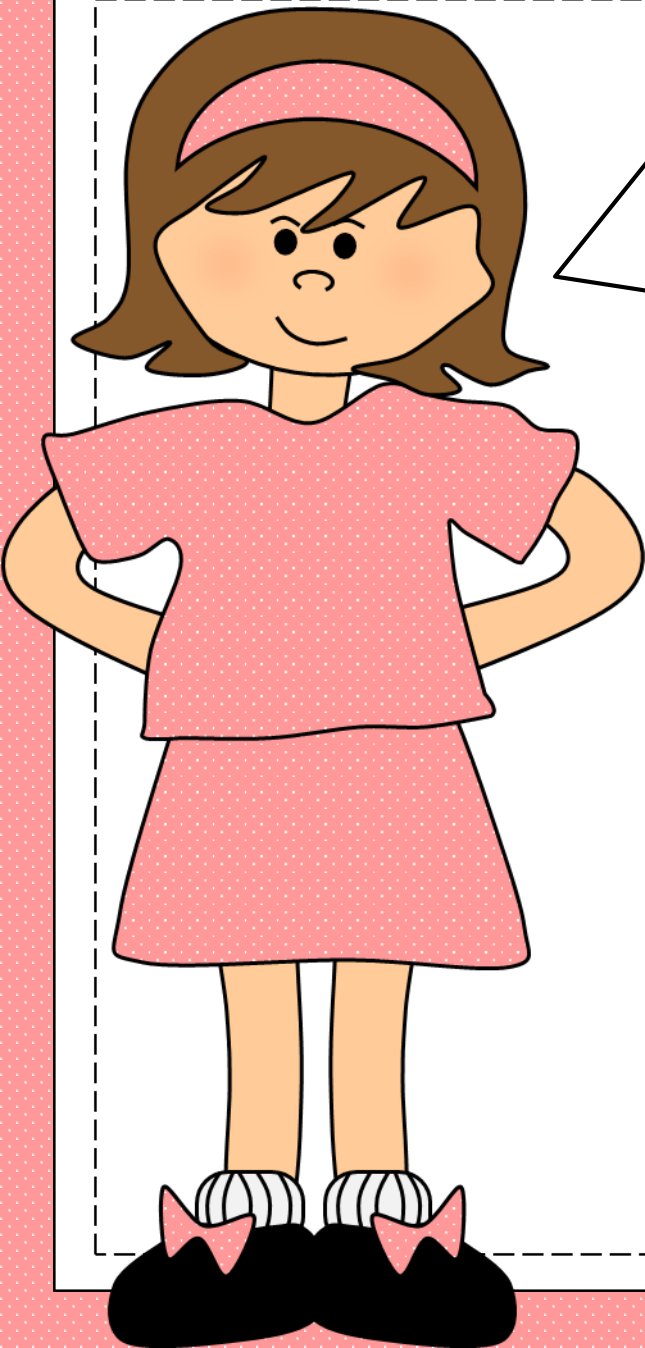


$$20 \times 40 = 2 \times 400$$

Is Alice correct?
Explain your answer.

Yes, Alice is correct.
They both equal 800.

Click
here



If $3,600 \div 12 = 300$
then what do you
have to **divide**
3,600 by to get **30**?

$$3,600 \div 120 = 30$$

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OFF



Multiples of 10, 100 and 1000 Worksheet

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a) $3 \times 6 =$ _____ $3 \times 60 =$ _____ $3 \times 600 =$ _____	b) $12 \times 2 =$ _____ $12 \times 20 =$ _____ $12 \times 200 =$ _____	c) $7 \times 5 =$ _____ $70 \times 5 =$ _____ $700 \times 5 =$ _____
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2) Use the division fact $63 \div 3 = 21$ to help answer the questions below.

$$630 \div 3 = \underline{\hspace{2cm}}$$

$$630 \div 30 = \underline{\hspace{2cm}}$$

$$21 \times 3 = \underline{\hspace{2cm}}$$

3) Use the multiplication fact $28 \times 7 = 196$ to help answer the questions below.

$$28 \times 70 = \underline{\hspace{2cm}}$$

$$280 \times 7 = \underline{\hspace{2cm}}$$

$$280 \times 70 = \underline{\hspace{2cm}}$$

4) Circle the incorrect answer.

a) $15 \times 30 = 450$ $450 \div 15 = 300$ $300 \times 15 = 4,500$	b) $180 \div 6 = 30$ $30 \times 6 = 180$ $60 \times 300 = 1,800$
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5) Answer the questions below.

a) Amrit says



480×2 is greater than 48×20

Is Amrit correct? Explain your thinking.

b) Ria says



If $12 \times 6 = 72$ then $720 \div 60 = 120$ because all the numbers are **ten times** bigger?

Is Ria correct? Explain your thinking.



Dividing by 10, 100 and 1000 Worksheet **Answers**

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a)	b)	c)
$3 \times 6 = \underline{18}$	$12 \times 2 = \underline{24}$	$7 \times 5 = \underline{35}$
$3 \times 60 = \underline{180}$	$12 \times 20 = \underline{240}$	$70 \times 5 = \underline{350}$
$3 \times 600 = \underline{1,800}$	$12 \times 200 = \underline{2,400}$	$700 \times 5 = \underline{3,500}$

2) Use the division fact $63 \div 3 = 21$ to help answer the questions below.

$$630 \div 3 = \underline{210}$$

$$630 \div 30 = \underline{21}$$

$$21 \times 3 = \underline{63}$$

3) Use the multiplication fact $28 \times 7 = 196$ to help answer the questions below.

$$28 \times 70 = \underline{1,960}$$

$$280 \times 7 = \underline{1,960}$$

$$280 \times 70 = \underline{19,600}$$

4) Circle the incorrect answer.

a)
$15 \times 30 = 450$
$450 \div 15 = 300$
$300 \times 15 = 4,500$
b)
$180 \div 6 = 30$
$30 \times 6 = 180$
$60 \times 300 = 1,800$

5) Answer the questions below.

a) Amrit says



480×2 is greater than 48×20

Is Amrit correct? Explain your thinking.

Amrit is incorrect.
They both equal 960.

b) Ria says



If $12 \times 6 = 72$ then $720 \div 60 = 120$ because all the numbers are **ten times** bigger?

Is Ria correct? Explain your thinking.

Ria is incorrect.
 $720 \div 60 = 12$



Multiples of 10, 100 and 1000 Worksheet

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a) $4 \times 80 =$ _____ $4 \times 800 =$ _____ $4 \times 8000 =$ _____	b) $12 \times 30 =$ _____ $12 \times 300 =$ _____ $12 \times 3000 =$ _____	c) $70 \times 9 =$ _____ $700 \times 9 =$ _____ $7000 \times 9 =$ _____
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2) Use the division fact $3,500 \div 50 = 70$ to help answer the questions below.

$$3,500 \div 5 =$$

$$500 \times 70 =$$

$$350 \div 50 =$$

3) Use the multiplication fact $32 \times 8 = 256$ to help answer the questions below.

$$32 \times 80 =$$

$$80 \times 320 =$$

$$320 \times 800 =$$

4) Circle the incorrect answer.

a) $160 \times 40 = 6,400$ $640 \div 40 = 160$ $1600 \times 40 = 64,000$	5) Answer the questions below.
b) $5,600 \div 8 = 700$ $70 \times 80 = 5,600$ $7000 \times 80 = 56,000$	

a) Molly says



$3,000 \times 20$ is greater than $300 \times 2,000$

Is Molly correct? Explain your thinking.

b)



If $4,200 \div 60 = 70$ then what do you have to divide $4,200$ by to get 700 ?



Dividing by 10, 100 and 1000 Worksheet **Answers**

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a)	b)	c)
$4 \times 80 = \underline{320}$	$12 \times 30 = \underline{360}$	$70 \times 9 = \underline{630}$
$4 \times 800 = \underline{3,200}$	$12 \times 300 = \underline{3,600}$	$700 \times 9 = \underline{6,300}$
$4 \times 8000 = \underline{32,000}$	$12 \times 3000 = \underline{36,000}$	$7000 \times 9 = \underline{63,000}$

2) Use the division fact $3,500 \div 50 = 70$ to help answer the questions below.

$$3,500 \div 5 = \underline{700}$$

$$500 \times 70 = \underline{35,000}$$

$$350 \div 50 = \underline{7}$$

3) Use the multiplication fact $32 \times 8 = 256$ to help answer the questions below.

$$32 \times 80 = \underline{2,560}$$

$$80 \times 320 = \underline{25,600}$$

$$320 \times 800 = \underline{256,000}$$

4) Circle the incorrect answer.

a)
$160 \times 40 = 6,400$
$640 \div 40 = 160$
$1600 \times 40 = 64,000$
b)
$5,600 \div 8 = 700$
$70 \times 80 = 5,600$
$7000 \times 80 = 56,000$

5) Answer the questions below.

a) Molly says

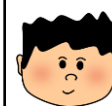


3,000 x 20 is greater than 300 x 2,000

Is Molly correct? Explain your thinking.

Molly is incorrect.
 $3,000 \times 20 = 60,000$
 $300 \times 2,000 = 600,000$

b)



If $4,200 \div 60 = 70$ then what do you have to divide 4,200 by to get 700?

6

Multiples of 10, 100 and 1000 Worksheet

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a) $5 \times 300 =$ _____ $5 \times 3,000 =$ _____ $5 \times 30,000 =$ _____	b) $12 \times 900 =$ _____ $12 \times 9,000 =$ _____ $12 \times 90,000 =$ _____	c) $800 \times 7 =$ _____ $8,000 \times 7 =$ _____ $80,000 \times 7 =$ _____
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2) Use the division fact $36,000 \div 300 = 120$ to help answer the questions below.

$$3,600 \div 120 =$$

$$1,200 \times 30 =$$

$$360,000 \div 30 =$$

3) Use the multiplication fact $56 \times 5 = 280$ to help answer the questions below.

$$560 \times 50 =$$

$$56,000 \times 5 =$$

$$500 \times 5,600 =$$

4) Circle the incorrect answer.

a) $21,000 \div 300 = 70$ $300 \times 700 = 210,000$ $210 \div 30 = 70$	b) $1,320 \div 11 = 120$ $1,200 \times 11 = 132,000$ $120 \times 110 = 13,200$
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5) Answer the questions below.

a) Mike says



$14,400 \div 120$ is less than $1,440 \div 12$

Is Mike correct? Explain your thinking.

b)



If $81,000 \div 9 = 9,000$ then what do you have to divide $81,000$ by to get 90 ?

Dividing by 10, 100 and 1000 Worksheet **Answers**

LO: multiply and divide whole numbers by 10, 100 and 1000 (Fluency, Reasoning and Problem Solving)

1) Use patterns to help solve the calculations below.

a)	b)	c)
$5 \times 300 = \underline{1,500}$	$12 \times 900 = \underline{10,800}$	$800 \times 7 = \underline{5,600}$
$5 \times 3,000 = \underline{15,000}$	$12 \times 9,000 = \underline{108,000}$	$8,000 \times 7 = \underline{56,000}$
$5 \times 30,000 = \underline{150,000}$	$12 \times 90,000 = \underline{1,080,000}$	$80,000 \times 7 = \underline{560,000}$

2) Use the division fact $36,000 \div 300 = 120$ to help answer the questions below.

$$3,600 \div 120 = \underline{300}$$

$$1,200 \times 30 = \underline{36,000}$$

$$360,000 \div 30 = \underline{12,000}$$

3) Use the multiplication fact $56 \times 5 = 280$ to help answer the questions below.

$$560 \times 50 = \underline{28,000}$$

$$56,000 \times 5 = \underline{280,000}$$

$$500 \times 5,600 = \underline{2,800,000}$$

4) Circle the incorrect answer.

a)

$$21,000 \div 300 = 70$$

$$300 \times 700 = 210,000$$

$$\underline{210 \div 30 = 70}$$

b)

$$1,320 \div 11 = 120$$

$$\underline{1,200 \times 11 = 132,000}$$

$$120 \times 110 = 13,200$$

5) Answer the questions below.

a) Mike says



14,400 \div 120 is less than 1,440 \div 12

Is Mike correct? Explain your thinking.

Mike is incorrect.
They both equal 120.

b)



If $81,000 \div 9 = 9,000$ then what do you have to divide 81,000 by to get 90?

900