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Name: _____ Period: _____ Date: _____

Multiplication of Fractions and Whole Number

Assignment

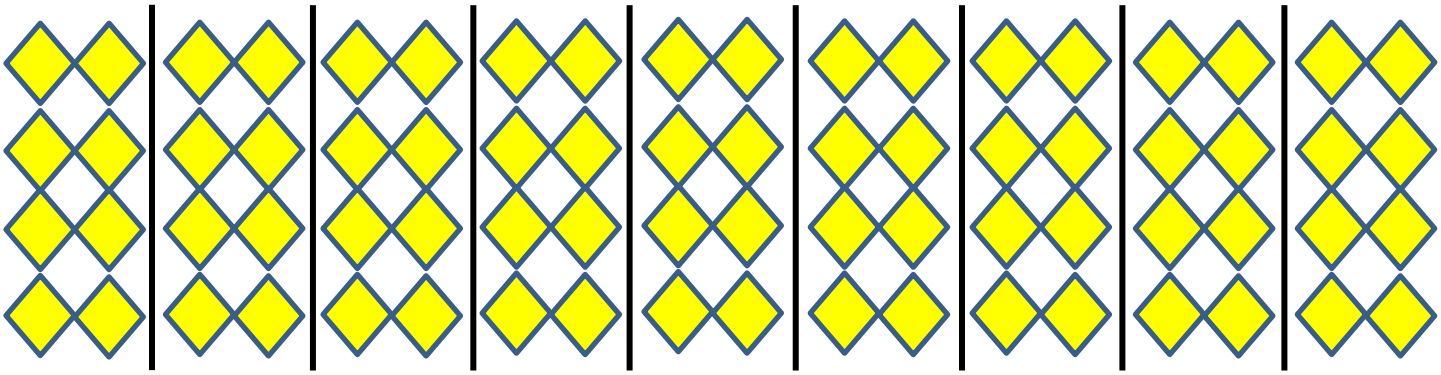
Math 5

Part A: Draw an array of **squares** to find the value of the following.

1. $\frac{4}{5}$ of 20 = ?

2. $\frac{2}{9}$ of 45 = ?

Part B: Find the value of the following.



1. $\frac{2}{9}$ of 81 = ?

2. $\frac{5}{9}$ of 81 = ?

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Name: _____ Period: _____ Date: _____

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Math 5

Part C: Use a tape diagram to find the value of the following.

1. $\frac{3}{4}$ of 100 = ?

2. $\frac{5}{7}$ of 140 = ?

Part D: Multiply the following.

1. $\frac{1}{6}$ of 42 = ?

2. $\frac{3}{4}$ of 20 = ?

3. $\frac{2}{5}$ of 55 = ?

4. $\frac{6}{7}$ of 49 = ?

5. $\frac{3}{10}$ of 120 = ?

6. $\frac{3}{8}$ of 96 = ?

7. $\frac{4}{9}$ of 180 = ?

8. $\frac{6}{7}$ of 112 = ?

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Name: _____ Period: _____ Date: _____

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Math 5

Part E: Solve the following problems.

1. Sam used $\frac{3}{4}$ of his savings for his vacation. If Sam had $1, 500, how much money did he spend? How much money does he have left?

2. At work, Pat has one hour break time. She usually spends some time reading newspaper, taking a nap and having coffee. If she spends $\frac{1}{3}$ of her time drinking coffee and $\frac{3}{5}$ to read newspaper, how much time (in minutes) does she have left to take a nap. How long does she read the paper? How long does she drink coffee?

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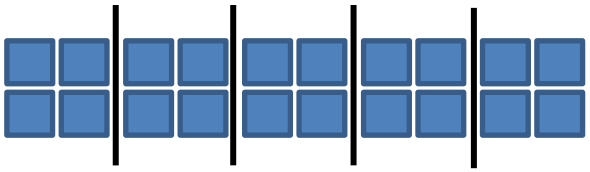
Answers:

Part A: Draw an array of **squares** to find the value of the following.

1. $\frac{4}{5}$ of 20 = ?

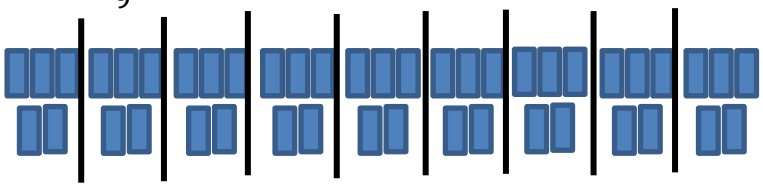


Each part is 1 fifth of 20.

$\frac{1}{5}$ of 20 = 4

Therefore, $\frac{4}{5}$ of 20 = 16.

2. $\frac{2}{9}$ of 45 = ?

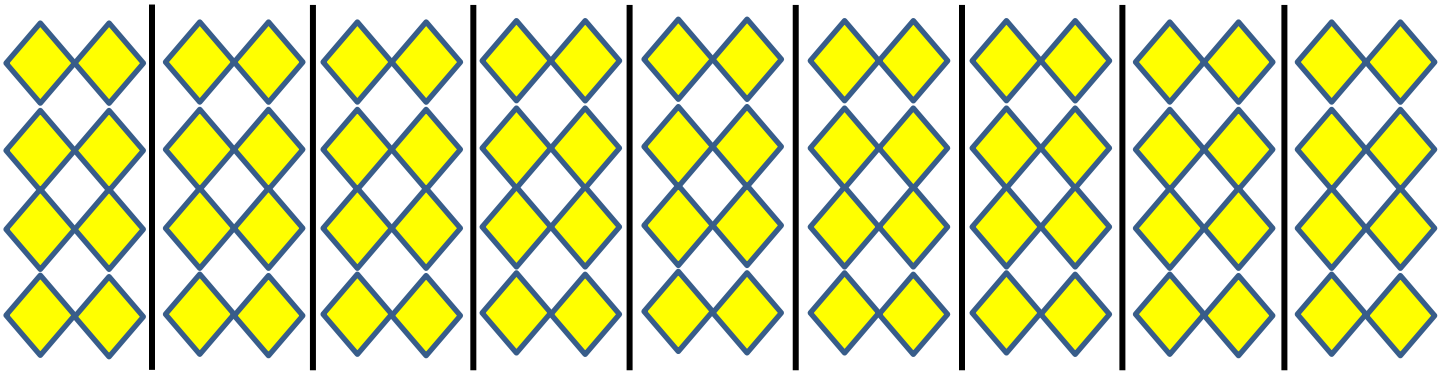


Each part is 1 ninth of 45.

$\frac{1}{9}$ of 45 = 5

Therefore, $\frac{2}{9}$ of 45 = 10.

Part B: Find the value of the following.



1. $\frac{2}{9}$ of 81 = 18

2. $\frac{5}{9}$ of 81 = 45

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Name: _____ Period: _____ Date: _____

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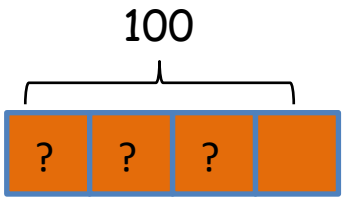
Math 5

Part C: Use a tape diagram to find the value of the following.

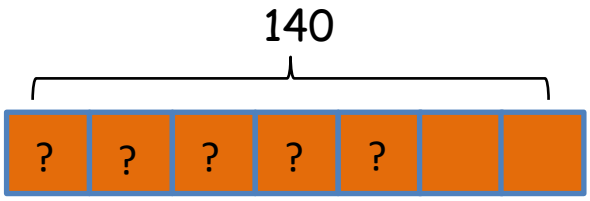
1. $\frac{3}{4}$ of 100 = 75



4 units = 100
1 unit = 100 ÷ 4
1 unit = 25
$\frac{1}{4}$ of 100 = 25

If 1 unit = 25, then:
3 units = 3 x 25
3 units = 75
$\frac{3}{4}$ of 100 = 75

2. $\frac{5}{7}$ of 140 = 100



7 units = 140
1 unit = 140 ÷ 7
1 unit = 20
$\frac{1}{7}$ of 140 = 20

If 1 unit = 20, then:
5 units = 5 x 20
5 units = 100
$\frac{5}{7}$ of 140 = 100

Part D: Multiply the following.

1. $\frac{1}{6}$ of 42 = 7

2. $\frac{3}{4}$ of 20 = 15

3. $\frac{2}{5}$ of 55 = 22

4. $\frac{6}{7}$ of 49 = 42

5. $\frac{3}{10}$ of 120 = 36

6. $\frac{3}{8}$ of 96 = 36

7. $\frac{4}{9}$ of 180 = 8

8. $\frac{6}{7}$ of 112 = 96

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Name: _____ Period: _____ Date: _____

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Assignment

Math 5

Part E: Solve the following problems.

1. Sam used $\frac{3}{4}$ of his savings for his vacation. If Sam had \$1, 500, how much money did he spend? How much money does he have left?

$\frac{3}{4}$ of 1 500 = ?

$$\frac{3}{4} \times 100 = \frac{3}{4} \times \frac{1\,500}{1}$$

$$= \frac{4\,500}{4}$$

$$= 1\,125$$

Sam spent \$1 125 for his vacation.

\$1 500 - \$1 125 = \$ 375 – Money Sam has left.

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Name: _____ Period: _____ Date: _____

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2. At work, Pat has one hour break time. She usually spends some time reading newspaper, taking a nap and having coffee. If she spends $\frac{1}{3}$ of her time drinking coffee and $\frac{3}{5}$ to read newspaper, how much time (in minutes) does she have left to take a nap. How long does she read the paper? How long does she drink coffee?

*1 hour = 60 minutes

$\frac{1}{3}$ of 60 = ?

$$\frac{1}{3} \times 60 = \frac{1}{3} \times \frac{60}{1}$$
$$= \frac{60}{3}$$
$$= 20$$

She spends 20 minutes to drink coffee.

$\frac{3}{5}$ of 60 = ?

$$\frac{3}{5} \times 60 = \frac{3}{5} \times \frac{60}{1}$$
$$= \frac{180}{5}$$
$$= 36$$

She spends 36 minutes to read newspaper.

60 – 20 - 36 = 4 minutes to take a nap.