Incoming 7th Grade Summer Math Packet Madina Academy

Date:

Summer Math

Name: Score:

PreAlgebra

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Find each product.

$$\mathbf{0}$$
 $((13-6))^2+11+6$

3
$$10 \div 2 + 4 + (2 \times 10)$$

$$(12 \div 3)^2 \times (150 - 145)$$

Find each difference. Answers should be in simplest form.

$$\frac{7}{18} - \frac{5}{14} =$$

9
$$\frac{5}{6} - \frac{1}{2} =$$

$$\Theta = \frac{3}{4} - \frac{1}{5} =$$

3
$$\frac{7}{12} - \frac{1}{2} =$$

Find each quotient. Simplify your answer.

a
$$3\frac{1}{2} \div 1\frac{3}{4} =$$
 a $2\frac{4}{5} \div 1\frac{1}{5} =$
a $2\frac{1}{5} \div 1\frac{1}{5} =$
b $1\frac{1}{5} \div 1\frac{4}{5} =$

$$2\frac{4}{5} \div 1\frac{1}{5} =$$

$$2\frac{1}{5} \div 1\frac{1}{5} =$$

6
$$1\frac{1}{5} \div 1\frac{4}{5} =$$

$$\mathbf{3} \quad 3\frac{13}{14} \div \quad 1\frac{1}{7} =$$

Percents య

Decimals

-ractions

Find each quotient.

A cookie-of-the-month subscription costs \$14 each month or \$150 if you pay for the whole year at one time. How much money is saved if you purchase the year at once rather than paying monthly?

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Fractions

Word Problems

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 $8 \times 6 =$

 $7 \times 11 =$

 $5 \times 6 =$

 $7 \times 3 =$

 $10 \times 6 =$

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Find each product.

$$5 \times 9 =$$

$$12 \times 7 =$$

$$9 \times 6 =$$

Find each prime factorization of each number.

Find each missing part to make fractions equivalent.

Fractions

$$\mathbf{0} \quad \frac{6}{10} = \frac{6}{20}$$

$$\frac{3}{6} = \frac{3}{19}$$

$$\frac{7}{120} = \frac{70}{120}$$

$$\bullet \frac{4}{9} = \frac{4}{18}$$

6
$$\frac{1}{48}$$

3
$$\frac{7}{120} = \frac{70}{120}$$

Find each quotient. Simplify your answer.

$$\bullet \frac{8}{9} \div 9 = --$$

4
$$\frac{3}{7} \div 5 =$$

a
$$\frac{8}{9} \div 9 =$$
 b $\frac{3}{7} \div 5 =$ **c** $\frac{7}{9} \div 5 =$ **d** $\frac{1}{2} \div 6 =$

6
$$\frac{1}{2} \div 6 = -$$

$$\bullet \quad \frac{5}{7} \div 2 = --$$

Percents

య

Decimals

Find each product.

Enid went shopping this weekend. She spent half of her money on a new pair of shoes and $\frac{2}{3}$ of the remainder on a belt. If she spent \$16 on a belt, how much money did she begin her shopping trip with?

2 In the wizarding world 1 Galleon is equal to 17 Sickles and 1 Sickle is equal to 29 Knuts. If a wand costs 23 Galleons, how many Knuts would that be?

Word Problems

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	Find each prod	uct.		
ons	6 x 12 =	11 x 11 =	12 x 10 =	1 x 3 =
Operations	5 x 12 =	2 x 6 =	4 x 2 =	9 x 5 =
_	3 x 9 =	7 x 7 =	4 x 3 =	9 x 3 =
Basic	12 x 6 =	2 x 6 =	8 x 8 =	9 x 9 =
B	10 x 10 =	12 x 1 =	9 x 11 =	2 x 2 =

Fill in the divisibility chart below with "yes" and "no".

Is 28,544 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Is 18,503 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Find each missing part to make fractions equivalent.

Fractions

$$0 \frac{1}{2} = \frac{3}{2}$$

$$\bullet \frac{2}{7} = \frac{6}{1}$$

2
$$\frac{1}{6} = \frac{3}{1}$$

6
$$\frac{3}{13}$$
 = $\frac{3}{104}$

3
$$\frac{4}{6}$$

Find each quotient. Simplify your answer.

a
$$23\frac{1}{3} \div 2\frac{1}{2} =$$
 a $1\frac{1}{6} \div 14 =$

a
$$1\frac{1}{6} \div 14$$

9
$$1\frac{9}{16} \div 2\frac{11}{12} =$$

6 3 ÷
$$1\frac{10}{11}$$
 =

6 3 ÷
$$6\frac{2}{3}$$
 =

Percents య Decimals Find each quotient.

0

12.6 109.62

983.7

1 Dante spends $\frac{1}{3}$ of his birthday money on a video game. He spends 1/5 of the remainder on candy and twice as much on Pokémon cards. He has \$16 left over. How much money did he receive?

2 The area of a rectangle is 80cm². The perimeter is 36cm. What are the dimensions of the rectangle?

Word Problems

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Find each difference.

- **1** 79,168 37,107
- **2** 665,233 554,120 **3** 360,514 200,304

Find the area of each figure.

- 9cm and a height of 13cm.
- **1** A rectangle with a base of **2** A rectangle with a base of 13in and a height of 11in.

4 666,899 – 406,102 **5** 730,804 – 301

- **2** A triangle with a base of 9ft and a height of 14ft.
- **4** A rectangle with a base of 20in and a height of 6in.

Find each difference. Simplify your answer.

$$\frac{20}{25} - \frac{20}{25} =$$

$$\frac{10}{16} - \frac{3}{16} = --$$

$$\mathbf{\Theta} \quad \frac{31}{45} - \frac{1}{45} = \cdots$$

Find each quotient. Simplify your answer.

a
$$1\frac{3}{17} \div 1\frac{7}{48} =$$
 a $1\frac{4}{5} \div 9 =$
a $2 \div 1\frac{5}{21} =$ **b** $4\frac{2}{3} \div 5 =$

a
$$1\frac{4}{5} \div 9 =$$

9 2 ÷
$$1\frac{5}{21}$$
 =

6
$$4\frac{2}{3} \div 5 =$$

6
$$1\frac{1}{8} \div 1\frac{1}{4} =$$

Percents Decimals &

Write each percent as decimal.

Ms. Felder is making spaghetti for herself and her 4 children. The noodles cost \$1.82, the tomato sauce costs \$3.09 and the meat is \$6.84. How much does the spaghetti cost per person?

2 Six pencils and two erasers cost \$2.42. One pencil and two erasers cost \$0.82. What is the price of each pencil and each eraser?

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Basic Operations	
JS	1

Find	each	product.	
------	------	----------	--

 $6 \times 6 =$

 $6 \times 4 =$

$$5 \times 9 =$$

$$=$$
 7 x 4 =

Find each greatest common factor (GCF).

- **3** 84, 140
- **2**4, 72
- **3** 27, 108, 45

- **4** 33, 165
- **6** 42, 48

Find each missing part to make fractions equivalent.

Fraction

$$\frac{2}{3} = \frac{14}{3}$$

$$\bullet$$
 $\frac{1}{14}$

 $\Theta = \frac{56}{15} = \frac{56}{120}$

9
$$\frac{27}{14} = \frac{27}{126}$$

$$\bullet$$
 $\frac{1}{6}$ = $\frac{3}{6}$

Find each quotient. Simplify your answer.

$$\bullet \frac{1}{3} \div 8 = --$$

$$\bullet \frac{2}{9} \div 9 = --$$

a
$$\frac{1}{3} \div 8 =$$
 b $\frac{2}{9} \div 9 =$ **c** $\frac{1}{3} \div 6 =$ **d** $\frac{4}{5} \div 2 =$

$$\Theta = \frac{4}{5} \div 2 = -$$

$$\mathbf{e} \frac{8}{12} \div 3 =$$

Percents Decimals &

Write each percent as a **simplified** fraction.

a 14.8% = ——

Jan is making paracord bracelets and keychains. He needs 8ft to make a bracelet and 3ft for a keychain. If he has 37ft of paracord, how many bracelets and keychains could he make to use up all of the cord?

2 If Jan wants to make an equal number of bracelets and keychains, how many can he make with 55ft?

Word Problems

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Sasic Operations

Find each difference.

1 659,804 – 227,701 **2** 197,975 – 140,812 **3** 87,763 – 34,133

Find the lowest common multiple (LCM).

10, 7

2 11, 2

6 6, 10, 14

4 870,253 – 153

6 973,583 – 433,062

4 7, 5

6 10, 3

Fractions

Simplify each fraction into lowest terms.

$$\mathbf{0} \quad \frac{35}{60} = -$$

$$\bullet \frac{5}{30} = --$$

9
$$\frac{14}{70}$$
 = ---

9
$$\frac{10}{30}$$
 = ---

9
$$\frac{48}{88} = \frac{1}{88}$$

Find each sum. Simplify your answer.

a
$$1\frac{3}{13} + 1\frac{3}{10} =$$
 a $4\frac{7}{20} + 4\frac{9}{11} =$
b $5\frac{2}{7} + 5\frac{6}{7} =$ **c** $4\frac{13}{14} + \frac{2}{5} =$

$$\mathbf{0} \quad 4\frac{7}{20} + 4\frac{9}{11} =$$

$$\mathbf{9} \quad 5\frac{2}{7} + 5\frac{6}{7} =$$

6
$$4\frac{13}{14} + \frac{2}{5} =$$

$$\mathbf{6} \quad 8 \frac{1}{2} + 7 \frac{7}{15} =$$

Decimals & Percents

Write each fraction as a percent.

$$\mathbf{0} \ 4\frac{5}{12} =$$

$$\bullet$$
 $\frac{1}{6}$ =

9
$$\frac{1}{4}$$
 =

6
$$3\frac{1}{12}$$
 =

9
$$\frac{3}{11}$$
 =

• Josiah has 15 quarters, 8 dimes and 12 nickels. He wants to buy a snack that costs \$5. Does he have enough money? Explain.

2 At the school store a pencil costs \$0.15, a pen costs \$0.30 and a notebook costs \$1.45. Brianna buys 5 pencils and 1 pen. If she brought \$6 to the store, how many notebooks can she buy?

Word Problems

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	Find each quot	ient.		
ons	30 ÷ 3 =	42 ÷ 7 =	36 ÷ 6 =	1 ÷ 1 =
Operations	72 ÷ 8 =	72 ÷ 9 =	72 ÷ 8 =	7 ÷ 1 =
_	42 ÷ 7 =	5 ÷ 1 =	70 ÷ 7 =	12 ÷ 4 =
Basic	27 ÷ 3 =	12 ÷ 6 =	60 ÷ 6 =	42 ÷ 7 =
В	2 ÷ 2 =	56 ÷ 8 =	48 ÷ 6 =	64 ÷ 8 =
		ı	'	1

Fill in the divisibility chart below with "yes" and "no".

Is 97,650 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Is 42,481 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Find each sum. Answers should be in simplest form.

Fractions

$$\frac{1}{2} + \frac{2}{5} =$$

$$\bullet$$
 $\frac{3}{5} + \frac{1}{3} =$

9
$$\frac{1}{3} + \frac{1}{3} =$$

6
$$\frac{3}{4} + \frac{7}{10} =$$

3
$$\frac{13}{15} + \frac{1}{2} =$$

Find each quotient. Simplify your answer.

$$\mathbf{0} \quad 7\frac{1}{2} \times 7\frac{1}{2} =$$

9
$$4\frac{5}{18} \times 2\frac{1}{10} =$$
 9 $1\frac{11}{24} \times 1\frac{1}{4} =$

6
$$1\frac{11}{24} \times 1\frac{1}{4} =$$

6
$$2\frac{1}{10} \times 3\frac{3}{5} =$$

Percents ⋖

Decimals

Find each quotient.

0

12 110.88

6.991.77

Brandon graphs three points on a coordinate plane: (2,8),(0,4) and (3,10). What shape do these points make?

2 Feliciano gets up at 6:33am. It takes him 24 minutes to eat breakfast, 2 minutes to brush his teeth and 7 minutes to get dressed. At what time is he ready for school?

Word Problems

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PreAlgebra

Operations Basic (Find each product.

0	221
×	5

Fill in the divisibility chart below with "yes" and "no".

Is 19,103 divisible by each of the given numbers?

1	2	3	5	10	

Is 41,446 divisible by each of the given numbers?

1	2	3	5	10

Find each quotient. Simplify your answer.

$$\bullet \quad \frac{4}{7} \div \frac{1}{10} = --$$

$$\bullet \frac{3}{7} \div \frac{1}{3} = -$$

9
$$\frac{1}{2} \div \frac{10}{11} = -$$

6
$$\frac{5}{6} \div \frac{4}{8} =$$

$$\bullet$$
 $\frac{5}{7} \div \frac{3}{4} = --$

Find each sum. Simplify your answer.

a
$$3\frac{4}{9} + \frac{3}{4} =$$
 a $8\frac{1}{2} + 5\frac{2}{3} =$
a $2\frac{1}{2} + \frac{4}{13} =$
b $8\frac{1}{12} + 4\frac{3}{5} =$

$$\bullet$$
 $8\frac{1}{2} + 5\frac{2}{3} =$

$$2 \frac{1}{2} + \frac{4}{13} =$$

6
$$8\frac{1}{12} + 4\frac{3}{5} =$$

$$\mathbf{6} \quad 6 \frac{9}{14} + 5 \frac{4}{15} =$$

Percents Decimals & Convert each decimal into **simplified** fraction form.

Nate is making baby blankets. He needs 40in. of one fabric and 30in. of the second fabric for each blanket. How much fabric does he need to make 10 blankets? Give your answer in feet and inches.

2 Lin is 5ft. tall and casts an 8ft. shadow. At the same time of day, a tree casts a 72ft. shadow. How tall is the tree?

Word Problems

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PreAlgebra

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Find each quotient.

$$42 \div 6 =$$

$$2 \div 1 =$$

$$30 \div 10 =$$

$$7 \div 1 =$$

$$35 \div 7 =$$

$$63 \div 7 =$$

$$48 \div 8 =$$

$$20 \div 4 =$$

$$42 \div 6 =$$

$$30 \div 10 =$$

$$24 \div 8 =$$

$$7 \div 7 =$$

$$80 \div 8 =$$

$$40 \div 10 =$$

$$8 \div 4 =$$

$$50 \div 10 =$$

$$12 \div 6 =$$

$$10 \div 10 =$$

Use the divisibility rules to answer each question.

- Is 553,776 divisible by 10?
- Is 598,594 divisible by 10?
- Is 802,073 divisible by 1?
- Is 184,749 divisible by 10?
- Is 805,969 divisible by 5?

Fractions

Find each quotient. Simplify your answer.

$$\bullet \quad \frac{5}{9} \div \frac{1}{7} = ---$$

$$\bullet \frac{1}{2} \div \frac{1}{4} = --$$

$$e^{\frac{5}{9} \div \frac{1}{8}} = --$$

6
$$\frac{6}{9} \div \frac{6}{10} =$$

$$\bullet$$
 $\frac{4}{5} \div \frac{1}{2} = ---$

Find each quotient. Simplify your answer.

a
$$2\frac{1}{2} \times 2 =$$
 a $13\frac{1}{3} \times 2\frac{1}{2} =$

Q
$$13\frac{1}{3} \times 2\frac{1}{2} =$$

9 2 ×
$$1\frac{4}{5}$$
 =

6
$$1\frac{1}{13} \times 1\frac{27}{50} =$$

6
$$3\frac{1}{2} \times 2\frac{1}{3} =$$

Percents Decimals &

Write each fraction as a decimal.

$$0 \frac{1}{12} =$$

a
$$3\frac{4}{5}$$
 =

9
$$\frac{1}{3}$$
 =

6
$$4\frac{9}{10}$$
 =

$$\frac{9}{11} =$$

A man parachutes from an airplane at an altitude of 12,500ft. He freefalls for about a minute and then pulls the cord at an altitude of 2,315ft. How far did he freefall? Give your answer in feet.

2 Give your answer for question 1 in kilometers if 1km is approximately 3,280ft. Round your answer to the nearest tenth.

Word Problems

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PreAlgebra

Sasic Operations

Find each sum or difference.

- **1** 96,827 27,384
- **2** 19,991 486
- **3** 19,038 2,569
- Find each prime factorization of each number.
- **3**5

2 15

② 250

- **4** 55,473 22,850 **5** 98,745 + 89,414

4 9

6 16

-ractions

Find each difference. Simplify your answer.

$$\frac{2}{47} - \frac{1}{47} = ---$$

$$\frac{10}{29} - \frac{10}{29} = --$$

$$\mathbf{G} \quad \frac{23}{27} - \frac{20}{27} = \mathbf{\dots}$$

$$\mathbf{e} \quad \frac{3}{18} - \frac{3}{18} = \cdots$$

Find each sum. Simplify your answer.

a
$$6\frac{4}{5} + 6\frac{5}{14} =$$
a $9\frac{5}{9} + 9\frac{2}{3} =$
b $5\frac{1}{2} + \frac{4}{5} =$
c $7\frac{3}{5} + 1\frac{1}{3} =$

$$9 \frac{5}{9} + 9 \frac{2}{3} =$$

$$\mathbf{9} \quad 5 \frac{1}{2} + \quad \frac{4}{5} =$$

6
$$7\frac{3}{5} + 1\frac{1}{3} =$$

$$\mathbf{6} \quad 7\frac{1}{2} + 7\frac{3}{5} =$$

Percents Decimals &

Write each percent as decimal.

93% =

• Mr. Burke's class has 25 students. 40% of them are sick on Monday morning. How many children were in class that day?

2 Your brother traveled 117 miles in 2.25 hours to visit you. What was his average speed in miles per hour?

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Basic

Find each product.

Fill in the divisibility chart below with "yes" and "no".

Is 91,652 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

6	68
×	64

Is 56,359 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Simplify each fraction into lowest terms.

$$\frac{45}{75} = ---$$

$$\bullet$$
 $\frac{45}{126} = --$

$$e^{-\frac{49}{70}} = ---$$

9
$$\frac{24}{28} = --$$

9
$$\frac{56}{63} = -$$

Find each quotient. Simplify your answer.

a
$$\frac{2}{4} \div 11 =$$
 a $\frac{6}{7} \div 2 =$ **b** $\frac{2}{7} \div 6 =$ **b** $\frac{4}{7} \div 7 =$

$$\bullet \frac{6}{7} \div 2 = --$$

$$e^{\frac{2}{7}} \div 6 = --$$

6
$$\frac{4}{7} \div 7 = -$$

$$e^{\frac{2}{3}} \div 6 = -$$

Percents

Decimals &

Answer each of the following questions on percent.

- **1** What is 80% of 250?
- What is 95% of 335?
- What is 6% of 220?
- What is 50% of 210?
- What is 50% of 190?

1 A triangle has a base of 12cm and a height of 6cm. A square has a base of 9cm. Which has the larger area? By how much?

2 Darnel is having a cookout. The hamburger patties come in a box of 12 but the hamburger buns come in bags of 8. How many boxes & bags should he purchase so he has an even number of patties and buns?

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Find each product.

0	66
×	54
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Fill in the divisibility chart below with "yes" and "no".

Is 6,006 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

23

6	42
×	21

Is 78,677 divisible by each of the given numbers?

1	2	3	4	5	6	8	9	10

Find each sum. Simplify your answers.

_	13	1		
0	15	15	=	

a
$$\frac{7}{15} + \frac{6}{15} =$$
 b $\frac{3}{14} + \frac{10}{14} =$

$$\Theta$$
 $\frac{3}{14} + \frac{10}{14} = ---$

3
$$\frac{7}{9} + \frac{2}{9} =$$

Find each quotient. Simplify your answer.

a
$$2\frac{4}{5} \div 1\frac{3}{4} =$$
 a $2\frac{6}{11} \div 4\frac{3}{8} =$
a $18 \div 3 =$
b $1\frac{1}{9} \div 1\frac{1}{6} =$

$$2\frac{6}{11} \div 4\frac{3}{8} =$$

6
$$1\frac{1}{9} \div 1\frac{1}{6} =$$

6
$$1\frac{3}{4} \div 6\frac{7}{8} =$$

Percents Decimals &

Answer each of the following questions on percent.

- What is 25% of 35?
- What is 145% of 380?
- What is 6% of 455?
- What is 4% of 465?
- What is 5% of 185?

- In science class, three beakers contain ½, ¼, and ¾ cups of a liquid. The teacher pours them all together, and then distributes the liquid evenly between the beakers. How much liquid does each beaker now contain?
- **2** A shipping box of **Chocolate Valentine Hearts** costs \$65 and contains 13 individually wrapped Valentine Hearts. What is the unit price per Valentine Heart?

Word Problems