

### 3.11 Review for Test 3: Fraction Operations and Probability Name: \_\_\_\_\_

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1) Cale made some food for a sleepover party. He made chicken sandwiches and meatball sandwiches. He also made chocolate cookies and sugar cookies. Which list below shows all of the possible outcomes if a person randomly picked one sandwich and one cookie?

- a) (chicken, chocolate), (meatball, sugar)
- b) (chicken, chocolate), (meatball, chocolate), (chicken, sugar), (meatball, sugar)
- c) (chicken, meatball), (chicken, chocolate), (chicken, sugar), (meatball, chicken), (meatball, chocolate), (meatball, sugar)
- d) (chicken, sugar), (meatball, sugar), (chicken, meatball), (chocolate, sugar)

2)

The reciprocal of $\frac{3}{38}$
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A

$2^3$
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B

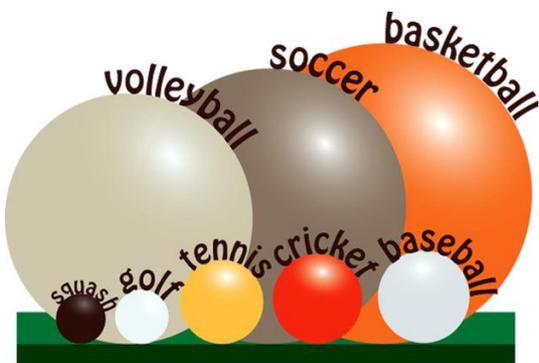
Which statement is true?

- (A) A is greater than B.
- (B) B is greater than A.
- (C) A and B are equal.
- (D) There is not enough information to tell which is greater.

3) Find this quotient.

$$2\frac{8}{9} \div 4\frac{1}{3}$$

4) The maximum weight for a basketball is  $22\frac{9}{10}$  ounces. For a baseball it is  $5\frac{1}{2}$  ounces, and for a tennis ball it is  $2\frac{1}{16}$  ounces. How much heavier is a maximum-weight basketball than a maximum weight baseball?



5) Find this difference.

$$7\frac{2}{3} - 4\frac{4}{5}$$

6) Grace's recipe for rye bread calls for

$3\frac{3}{4}$  cups of white flour,  $5\frac{2}{3}$  cups of

rye flour, and  $2\frac{1}{2}$  tablespoons of butter.

How much flour is used altogether?

7) A box contains different color paper clips. The box contains 3 red, 4 yellow, 5 green, and 6 blue paper clips.

What is the probability of reaching into the box and selecting a red paper clip?

P(red)=

What is the probability of reaching into the box and selecting a paper clip that is not yellow?

P(not yellow)=

What is the probability of reaching into the box and selecting a blue paper clip, then putting the blue paper clip back in the box, then reaching into the box and selecting a red paper clip?

P(blue, red)=

Were these last two events independent or dependent events?

8) Consider the equation  $a \div b = c$ .

If the dividend,  $a$ , is decreased, what is the effect on the quotient,  $c$ ?

If the divisor,  $b$ , is increased, what is the effect on the quotient,  $c$ ?

If the quotient,  $c$ , has increased, what might that tell you about either the dividend,  $a$ , the divisor,  $b$ , or both?

If you were choosing  $a$  and  $b$  in an attempt to minimize  $c$ , what types of values might you choose?

- 9) A box of Lucky Charms cereal weighs 18 ounces. Jack likes to eat the marshmallows and leave the rest of the cereal in the box. The marshmallows make up  $\frac{2}{5}$  of the weight of the box of cereal. If Jack eats all of the marshmallows in one box of cereal, how many ounces of cereal is left?



10)

$$\sqrt{81}$$

A

$$2\frac{5}{6} \div \frac{4}{9}$$

B

Which statement is true?

- (A) A is greater than B.
- (B) B is greater than A.
- (C) A and B are equal.
- (D) There is not enough information to tell which is greater.

11) Find the product.

$$5\frac{5}{8} \cdot 9\frac{3}{5}$$

12) Stuart the sloth loves to eat the leaves of the Cecropia tree.

Unfortunately, Stuart is a slow climber. If the tree is  $20\frac{1}{8}$  feet tall, and Stuart climbs at a rate of  $1\frac{7}{16}$  feet per minute, how long will it take Stuart to ascend the tree?



13) There are 10 yellow, 6 green, 9 blue, and 5 red cards in a stack of cards turned face down. Once a card is selected, it is not replaced. Find each probability.

P(two green cards)

P(two cards that are not blue)

Are these events independent or dependent? Why?



14) Your ticket was drawn for Friday's prize drawing. Congratulations, you won a prize! If the probability that you will like your prize is  $\frac{13}{16}$ , what is the probability that you will not like your prize?



15) Mr. Colby has 72 math students. He estimates that  $\frac{7}{9}$  of his students will watch the review videos to study for this test. How many students does Mr. Colby estimate will watch the review videos?

16) Estimate using benchmark values 0,  $\frac{1}{2}$ , and 1.

$$\frac{4}{5} - \frac{3}{7} + \frac{7}{16}$$

Estimate by rounding each value to the nearest whole number.

$$22\frac{1}{5} - 17\frac{5}{8}$$