Name:_____

_____ 1. What is $\frac{23}{4}$ as a mixed number?

A) $5\frac{1}{4}$

B) $5\frac{1}{2}$

C) $5\frac{3}{4}$

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

$$4\overline{)23} \quad \begin{array}{r} 5 \\ -20 \\ \hline 3R \end{array}$$

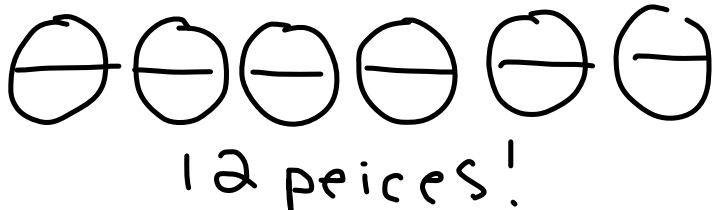_____ 2. What is the best estimate of $5\frac{8}{9} \div \frac{4}{9}$?

A) $\frac{1}{2}$
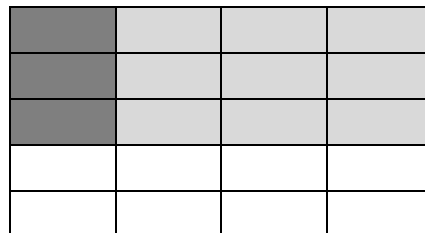
B) 3

C) 10

D) 12

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

12 peices!

_____ 3. Which expression is best represented by the model?

A) $\frac{1}{4} \times \frac{3}{4}$

B) $\frac{1}{4} \times \frac{3}{5}$

C) $\frac{3}{20} \times \frac{3}{5}$

D) $\frac{3}{5} \times \frac{1}{4}$

_____ 4. What is $\frac{2}{3} + \frac{2}{3} + \frac{2}{3} + \frac{2}{3}$ written as a multiplication statement?

A) $3 \times \frac{2}{3}$

B) 3×4

C) $4 \times \frac{2}{3}$ *(circled)*

D) $4 \times \frac{3}{2}$

_____ 5. Which multiplication statement is modelled?

A) $\frac{3}{7} \times \frac{4}{7}$

B) $3 \times \frac{4}{7}$

C) $5 \times \frac{4}{7}$ *(circled)*

D) $21 \times \frac{4}{7}$

5 sets of $\frac{4}{7}$

_____ 6. Which multiplication equation is modelled below?

3 $\frac{1}{3}$

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

$2\frac{1}{2}$

A) $2\frac{1}{3} \times 3\frac{1}{2} = 8\frac{1}{3}$ *(crossed out)*

B) $2\frac{1}{2} \times 3\frac{1}{3} = 8\frac{1}{3}$ *(circled)*

C) $2\frac{1}{3} \times 3\frac{1}{2} = 6\frac{1}{6}$ *(crossed out)*

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

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

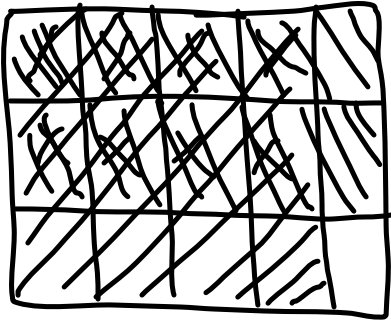$6 + 1\frac{3}{6} + \frac{4}{6} + \frac{1}{6}$

$7 + \frac{8}{6}$

$7 + 1\frac{2}{6} = 8\frac{1}{3}$

Section 2- Show All workings!
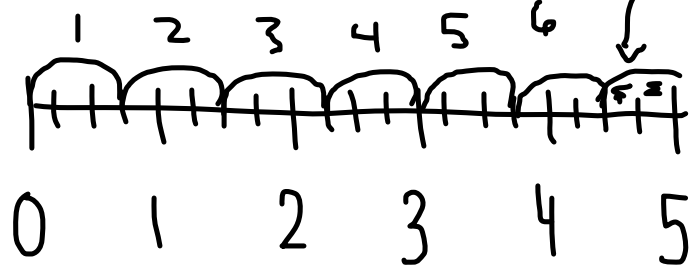
1. Using a model of your choice, evaluate each expression.   [4 marks]

A) $\frac{2}{3} \times \frac{4}{5}$ = $\frac{8}{15}$

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

2 out of 3

2. Calculate each expression. Reduce your answers to lowest terms, if necessary. [2 marks each]

KC C

A) $\frac{2}{3} \times \frac{4}{5}$

$\frac{8}{15}$

B) $\frac{4}{9} \div \frac{4}{5}$

$\frac{4}{9} \times \frac{5}{4}$

$\frac{5}{9}$

C) $\frac{55}{42} \times \frac{21}{35}$

6

$\frac{33 \div 3}{42 \div 3}$

$\frac{11}{14}$

D) $\frac{12}{7} \div \frac{10}{1}$

KC C

$\frac{12}{7} \times \frac{1}{10}_{5}$

$\frac{6}{35}$

E) $4\frac{1}{3} \times \frac{1}{9}$

$\frac{13}{3} \times \frac{1}{9}$

$\frac{13}{27}$

$\frac{4|7}{\times 3}$

51

F) $2\frac{3}{7} \div 3\frac{1}{3}$

$\frac{17}{7} \div \frac{10}{3}$

$\frac{17}{7} \times \frac{3}{10}$

$\frac{51}{70}$

G) $\frac{2}{5} + \frac{5}{4}$

$\frac{8}{20} + \frac{25}{20}$

$\frac{33}{20}$

$1\frac{13}{20}$

H) $\frac{7}{8} - \frac{3}{4}$

$\frac{7}{8} - \frac{6}{8}$

$\frac{1}{8}$

3. Calculate each expression. Reduce your answers to lowest terms, if necessary. [3 marks each]

A) $2\frac{2}{3} + \frac{5}{2} \div \frac{3}{4}$

$$\frac{8}{3} + \frac{5}{2} \div \frac{3}{4}$$

$$\frac{8}{3} + \frac{5}{2} \times \frac{4}{3}$$

$$\frac{8}{3} + \frac{10}{3}$$

$$= \frac{18}{3}$$

$$= 6$$

B) $\frac{3}{10} - \left(\frac{1}{5} + \frac{1}{4}\right) \times \frac{2}{3}$ $\times 4$ $\times 5$

$$\frac{3}{10} - \left(\frac{4}{20} + \frac{5}{20}\right) \times \frac{2}{3}$$

$$\frac{3}{10} - \frac{9}{20} \times \frac{2}{3}$$

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

$$\bigcirc$$

4. Write a real world word problem for the expression; $10 \times \frac{1}{2}$.   [2 marks]

Joanne give $\frac{1}{2}$ of her candy to her brother. If she has 10 candies, how many does her brother get?

✹ Answers will vary ✹

5. Sam bought $1\frac{2}{3}$ of a pound of chocolate. If he eats $\frac{3}{5}$ of it, how many pounds has he eaten?

[2 marks]

$$\frac{3}{5} \text{ "of" } 1\frac{2}{3} \quad \rightsquigarrow \quad \frac{3}{5} \times 1\frac{2}{3}$$

$$= \frac{3}{5} \times \frac{5}{3}$$

$$= \frac{1}{1}$$

$$= 1$$

He has eaten 1 pound.

6. Chris ate 2 slices of cake and Stephanie ate 1 slice. If Christopher ate ½ of the cake and all the slices were the same size, what fraction of the cake remained after Christopher and Stephanie had eaten? A diagram may help. [2 marks]
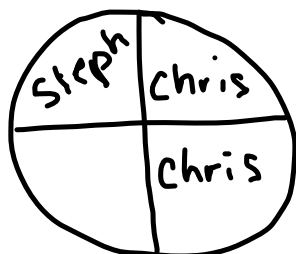
Entire Cake:

$$2 \div \frac{1}{2} = \frac{2}{1} \times \frac{2}{1} = \frac{4}{1} = 4 \text{ slices}.$$

Amount Left:

$$4 - 2 - 1 = \boxed{1 \text{ slice left}.}$$

7. Monica and Ryan shared 18 cookies. Monica ate 1/6 of the cookies. Ryan ate 1/3 of the cookies. How many cookies were left? [2 marks]

Monica

$$\frac{1}{6} \times \frac{18}{1} = \frac{18}{6} = 3$$

Ryan:

$$\frac{1}{3} \times \frac{18}{1} = \frac{18}{3} = 6$$

Cookies left:

$$18 - 3 - 6 = 9$$

$$\boxed{9 \text{ cookies were left}.}$$

8. McDonalds sell milkshakes in two sizes. A small milkshake is 300 ml and a large milkshake contains $\frac{2}{3}$ more.

A) How many ml are in a large milkshake in total? [2 marks]

$$300 \times \frac{2}{3} = \frac{600}{3} = 200 \text{ ml extra}$$

So, $300 + 200 = 500 \text{ mL}$

$$\boxed{\text{There are 500mL in a large milkshake}}$$

B) If Sally drinks $\frac{2}{3}$ of a **SMALL** milkshake and Ed drinks $\frac{1}{2}$ of a **LARGE** milkshake, who drinks the most? [2 marks]

Sally:

$$\frac{2}{3} \times \frac{300}{1}$$

$$= \frac{600}{3}$$

$$= 200$$

Ed:

$$\frac{1}{2} \times \frac{500}{1}$$

$$= \frac{500}{2}$$

$$= 250$$

$$\boxed{\text{So, Ed drinks the most.}}$$