Review for Test #2 over Ch 2 and 3

Work all the problems on a separate piece of paper showing all steps.

Change the following into an improper fraction:

1a) $5\frac{7}{9}$

1b) $10\frac{2}{3}$

Write the following as a mixed number:

2a) $\frac{181}{7}$

2b) $\frac{43}{6}$

Find the following in the list: $\frac{5}{4}$, $\frac{7}{9}$, $\frac{6}{11}$, $\frac{13}{13}$, $\frac{23}{7}$, $\frac{75}{78}$, and $\frac{13}{6}$

3a) The proper fractions.

3b) The improper fractions.

Write the following as a fraction:

If four out of five dentists surveyed recommend sugarless gum to their patients that chew gum,

4a) What fraction of the dentists recommend sugarless gum?

4b) What fraction of the dentists did not recommend sugarless gum?

Reduce to lowest terms:

5a) $\frac{555}{600}$

5b) $\frac{168}{120}$

Perform the indicated operations and reduce to lowest terms:

6) $\frac{3}{10}$ plus $\frac{9}{15}$ less $\frac{3}{20}$.

7) $\left(\frac{5}{8}\right)\left(\frac{4}{7}\right)\left(\frac{21}{9}\right)$

8) The product of $3\frac{1}{3}$ and $4\frac{1}{5}$.

9) The sum of $3\frac{11}{12}$ and $5\frac{3}{4}$.

10) $\frac{10}{21}$ divided into $\frac{6}{35}$.

11) $2\frac{4}{7}$ less than $11\frac{2}{5}$.

12) $9\frac{3}{8}$ less $\frac{1}{4}$.

13) $9\frac{2}{7}$ divided by $2\frac{4}{11}$.

14) $\frac{5}{8} \div \frac{3}{4} \div \frac{3}{2} + 0 \div \frac{10}{21}$

15) $7\frac{3}{8} \div 0 + \frac{4}{9} \bullet \frac{9}{16}$

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Perform the indicated operations and reduce to lowest terms:

16) $\dfrac{3\frac{1}{7}}{7\frac{1}{3}}$

17) $\left(\frac{2}{3} - \frac{1}{6}\right)^2 \div \frac{3}{4} + \frac{3}{8}$

18) $\left(4\frac{2}{3} \bullet 1\frac{3}{7} - 5\frac{1}{3}\right)^2 \div \left\{2\frac{2}{3}\right\} + 4\frac{5}{6}$

19) $\left(\left[\frac{1}{2}\right]^3 + \frac{5}{12} \bullet \frac{2}{3}\right) - \frac{1}{4}$

Compare using the symbols > or <:

20a) $\dfrac{11}{24}$ $\qquad$ $\dfrac{4}{9}$
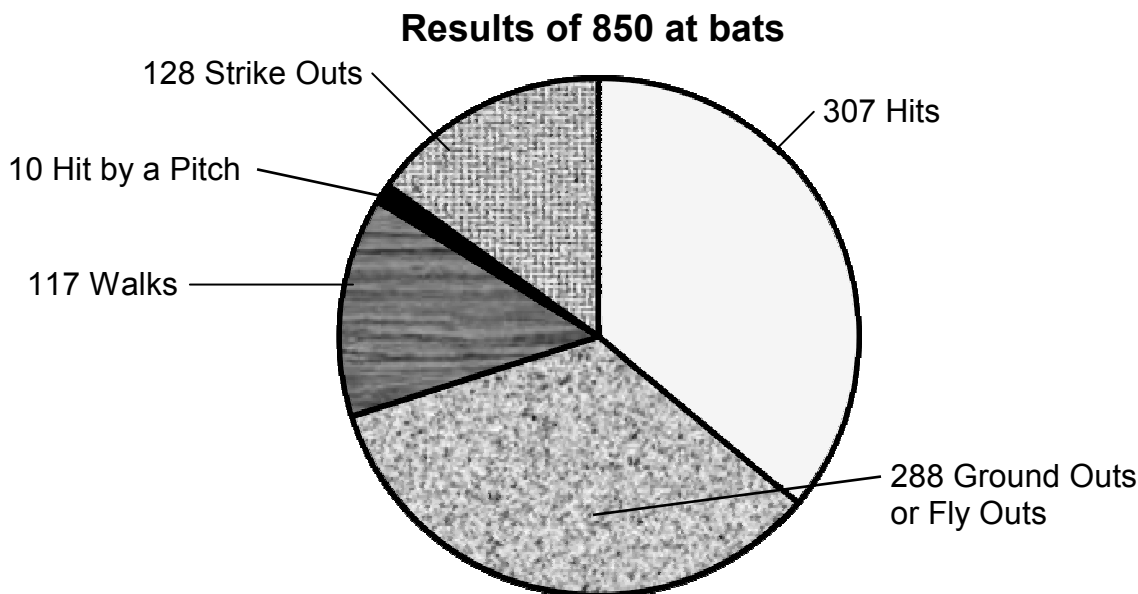
20b) $\dfrac{2}{3}$ $\qquad$ $\dfrac{9}{16}$

Solve the following:

21) If the stock of Krusty Krab's rose $\frac{1}{4}$, $2\frac{7}{8}$, and $1\frac{1}{2}$ points in the first three days of the week, what was the average gain per day?

22) The Coyote (Carnivorous Eattii) bought 15 gallons of Acme Super Moon Rocket fuel at $\$3\frac{3}{8}$ per gallon. If he used $12\frac{5}{12}$ gallons in his Acme Super Moon Rocket Jet in an attempt to catch the Road Runner (Eludious Speedii), how much fuel does he have left?

Solve the following:

23) Gary the snail eats $\frac{5}{7}$ of can of snail food per meal. If Sponge Bob feeds Gary twice a day, how many days will thirty-five cans of snail food last Gary?

24) If Bugs Bunny has 45 pounds of carrots and each carrot weighs $\frac{3}{5}$ of a pound, how many carrots does he have?

25) When Sponge Bob took Mr. Krab's daughter Pearl to her prom, he wore hydraulic legs that made him three and a half times taller than what he normally is. If he is normally $5\frac{1}{3}$ inches tall, how tall was he with the hydraulic legs?

Use the graph below to answer the following:

Results of 850 at bats

128 Strike Outs

10 Hit by a Pitch

117 Walks

307 Hits

288 Ground Outs or Fly Outs

26a) Write the fraction of at-bats that were strike outs.

26b) Write the fraction of at-bats (excluding walks) that were hits.

In the problem below, the student has made an error. Use critical thinking to find and correct the error. Then finish working the problem.

27) $\dfrac{5}{6} + \dfrac{2}{9}$

Solution:

The L.C.D. of 6 and 9 is 18.

$\dfrac{5}{6} + \dfrac{2}{9} = \dfrac{5}{18} + \dfrac{2}{18} = \dfrac{7}{18}$

28) $8 - 3\dfrac{2}{3}$

Solution:

$8 - 3\dfrac{2}{3}$

$= 5\dfrac{2}{3}$

29) $\dfrac{5}{8} \cdot \dfrac{3}{8}$

Solution:

$\dfrac{5}{8} \cdot \dfrac{3}{8}$

$= \dfrac{15}{8}$ or $1\dfrac{7}{8}$

30) $\dfrac{11}{12} \div \dfrac{4}{3}$

Solution:

$\dfrac{11}{12} \div \dfrac{4}{3} = \dfrac{11}{\cancel{12}} \div \dfrac{\cancel{4}}{3}$

$= \dfrac{11}{3} \cdot \dfrac{3}{1}$

$= \dfrac{11}{\cancel{3}} \cdot \dfrac{\cancel{3}}{1} = \dfrac{11}{1} = 11$

31) Find the average of $\frac{1}{4}$, $4\frac{5}{6}$, $7\frac{7}{8}$, and $\frac{1}{4}$.

Solution:

$\frac{1}{4} + 4\frac{5}{6} + 7\frac{7}{8} + \frac{1}{4} = \frac{1}{4} + \frac{29}{6} + \frac{63}{8} + \frac{1}{4}$

The L.C.D. of 4, 6, and 8 is 24.

$= \frac{6}{24} + \frac{116}{24} + \frac{189}{24} + \frac{6}{24} = \frac{317}{96} = 3\frac{29}{96}$.

Without working the problem, use critical thinking to determine which answers are unreasonable:

32) $20\frac{\#}{\#} + 6\frac{\#}{\#} + 15\frac{\#}{\#} + 23\frac{\#}{\#}$

a) $65\frac{59}{924}$ b) $38\frac{41}{924}$ c) $79\frac{59}{924}$ d) $66\frac{875}{924}$ e) $\frac{3}{5}$

33) $3\frac{\#}{\#} \div 6\frac{\#}{\#}$

a) $2\frac{3}{7}$ b) $\frac{13}{24}$ c) $\frac{35}{48}$ d) $2\frac{11}{12}$ e) $3\frac{11}{24}$

34) $29 - 3\frac{\#}{\#}$

a) $26\frac{6}{7}$ b) $26\frac{1}{7}$ c) $25\frac{3}{7}$ d) $25\frac{4}{7}$ e) $\frac{1}{7}$

35) $5 \bullet 3\frac{1\#}{1\#}$

a) $19\frac{3}{8}$ b) $19\frac{5}{8}$ c) $15\frac{7}{8}$ d) $21\frac{3}{8}$ e) $13\frac{1}{8}$

36) The average of $6\frac{\#}{\#}$, $8\frac{\#}{\#}$, and $7\frac{\#}{\#}$.

a) $21\frac{15}{29}$ b) $1\frac{53}{80}$ c) $\frac{133}{240}$ d) $22\frac{53}{80}$ e) $7\frac{13}{24}$

Answers:

1a) $\dfrac{52}{9}$ 1b) $\dfrac{32}{3}$ 2a) $25\dfrac{6}{7}$ 2b) $7\dfrac{1}{6}$ 3a) $\dfrac{7}{9}, \dfrac{6}{11}, \dfrac{75}{78}$

3b) $\dfrac{5}{4}, \dfrac{13}{13}, \dfrac{23}{7}, \dfrac{13}{6}$ 4a) $\dfrac{4}{5}$ 4b) $\dfrac{1}{5}$ 5a) $\dfrac{37}{40}$ 5b) $1\dfrac{2}{5}$

6) $\dfrac{3}{4}$ 7) $\dfrac{5}{6}$ 8) 14   9) $9\dfrac{2}{3}$ 10) $\dfrac{9}{25}$ 11) $8\dfrac{29}{35}$ 12) $9\dfrac{1}{8}$

13) $3\dfrac{13}{14}$ 14) $\dfrac{5}{9}$ 15) undefined   16) $\dfrac{3}{7}$ 17) $\dfrac{17}{24}$ 18) $5\dfrac{1}{2}$

19) $\dfrac{11}{72}$ 20a) >   20b) >   21) $1\dfrac{13}{24}$ points   22) $2\dfrac{7}{12}$ gallons

23) $24\dfrac{1}{2}$ days   24) 75 carrots   25) $18\dfrac{2}{3}$ inches   26a) $\dfrac{64}{425}$

26b) $\dfrac{307}{733}$ 27) $1\dfrac{1}{18}$ 28) $4\dfrac{1}{3}$ 29) $\dfrac{15}{64}$ 30) $\dfrac{11}{16}$ 31) $3\dfrac{29}{96}$

32) b, c, & e   33) a, d, & e   34) a, b, & e   35) c, d, & e

36) a, b, c, & d