

A296R

Grades 5-6

Hayes[®]

MATHEMATICS

Puzzles and Games

Written by Steve Slavin, Ph. D.

Addition

Subtraction

Measurements

Multiplication

Fractions

Division

Decimals

MATHEMATICS

Puzzles and Games-Grades 5-6

by Steve Slavin, Ph.D.

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ANSWER KEY

Page 1. Clarabell the Computer

1. $\begin{array}{r} 39 \\ \times 46 \\ \hline 1794 \end{array}$	2. $\begin{array}{r} 97 \\ \times 63 \\ \hline 6101 \end{array}$	3. $\begin{array}{r} 82 \\ \times 29 \\ \hline 2378 \end{array}$
4. $\begin{array}{r} 24 \\ \times 77 \\ \hline 1848 \end{array}$	5. $\begin{array}{r} 65 \\ \times 34 \\ \hline 2220 \end{array}$	6. $\begin{array}{r} 88 \\ \times 17 \\ \hline 1496 \end{array}$
7. $\begin{array}{r} 53 \\ \times 42 \\ \hline 2216 \end{array}$	8. $\begin{array}{r} 49 \\ \times 84 \\ \hline 4216 \end{array}$	9. $\begin{array}{r} 37 \\ \times 57 \\ \hline 2109 \end{array}$
10. $\begin{array}{r} 79 \\ \times 16 \\ \hline 1264 \end{array}$	11. $\begin{array}{r} 86 \\ \times 58 \\ \hline 4998 \end{array}$	12. $\begin{array}{r} 91 \\ \times 33 \\ \hline 3103 \end{array}$
13. $\begin{array}{r} 63 \\ \times 94 \\ \hline 5922 \end{array}$	14. $\begin{array}{r} 98 \\ \times 99 \\ \hline 9602 \end{array}$	15. $\begin{array}{r} 36 \\ \times 75 \\ \hline 2600 \end{array}$
16. $\begin{array}{r} 43 \\ \times 63 \\ \hline 2709 \end{array}$	17. $\begin{array}{r} 56 \\ \times 85 \\ \hline 4760 \end{array}$	18. $\begin{array}{r} 32 \\ \times 91 \\ \hline 2812 \end{array}$

Page 2. What Did This Cow Do?

204 = T 139 = H 116 = E
 163 = C 350 = O 622 = W
 153 = J 217 = U 88 = M 345 = P 116 = E 102 = D
 350 = O 336 = V 116 = E 489 = R
 204 = T 139 = H 116 = E
 88 = M 350 = O 350 = O 632 = N
 THE COW JUMPED OVER THE MOON.

Page 3. Putting Together Pieces of Pies

1. $\frac{1}{4} + \frac{1}{2} = \frac{1}{4} + \frac{2}{4} = \frac{3}{4}$ 2. $\frac{1}{3} + \frac{2}{3} = \frac{3}{3} = 1$ 3. $\frac{3}{4} + \frac{3}{4} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$ 4. $\frac{3}{8} + \frac{2}{8} = \frac{5}{8}$ 5. $\frac{5}{8} + \frac{1}{2} = \frac{5}{8} + \frac{4}{8} = \frac{9}{8} = 1\frac{1}{8}$ 6. $\frac{2}{3} + \frac{2}{3} = \frac{4}{3} = 1\frac{1}{3}$ 7. $\frac{1}{4} + \frac{3}{8} + \frac{1}{2} = \frac{2}{8} + \frac{3}{8} + \frac{4}{8} = \frac{9}{8} = 1\frac{1}{8}$ 8. $\frac{1}{2} + \frac{1}{4} + \frac{1}{4} = \frac{2}{4} + \frac{1}{4} + \frac{1}{4} = \frac{4}{4} = 1$ 9. $\frac{1}{8} + \frac{3}{8} + \frac{5}{8} = \frac{9}{8} = 1\frac{1}{8}$ 10. $\frac{1}{4} + \frac{1}{2} + \frac{3}{4} = \frac{1}{4} + \frac{2}{4} + \frac{3}{4} = \frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$ 11. $\frac{1}{8} + \frac{1}{4} + \frac{1}{2} = \frac{1}{8} + \frac{2}{8} + \frac{4}{8} = \frac{7}{8}$ 12. $\frac{1}{3} + \frac{2}{3} + \frac{3}{3} = \frac{6}{3} = 2$

Page 4. Brain Teasers

1. $\frac{1}{2} + 2\frac{1}{4} + 2\frac{1}{2} = 1\frac{2}{4} + 2\frac{1}{4} + 2\frac{2}{4} = 5 + \frac{5}{4} = 5 + 1\frac{1}{4} = 6\frac{1}{4}$
 2. $3 + 4 + 1 + 4 + 3 + \frac{1}{2} + \frac{1}{3} + \frac{3}{4} + \frac{2}{3} + \frac{1}{4} = 15 + \frac{6}{12} + \frac{4}{12} + \frac{9}{12} + \frac{8}{12} + \frac{3}{12} = 15 + \frac{30}{12} = 15 + 2\frac{6}{12} = 17\frac{1}{2}$ miles 3. $13 + 10 - 4 - 6 + \frac{1}{2} + \frac{3}{4} - \frac{1}{4} - \frac{1}{2} = 13 + \frac{5}{4} - \frac{3}{4} = 13\frac{2}{4} = 13\frac{1}{2}$ feet 4. $56 - 3 + 2 - 1 + \frac{1}{2} - \frac{7}{8} + \frac{1}{4} - \frac{1}{2} = 54 + \frac{3}{4} - \frac{7}{8} - \frac{4}{8} = 54 + \frac{6}{8} - \frac{11}{8} = 54 - \frac{5}{8} = 53\frac{3}{8}$
 5. $8\frac{3}{4} + 2\frac{1}{4} = 11\frac{4}{4} = 11 + 1 + \frac{1}{4} = 12\frac{1}{4}$ 12 $\frac{1}{4}$ - 3 $\frac{1}{4}$ = 8 miles
 6. 55.6 7. 43.63 seconds 8. $9 + 4\frac{3}{4} + 10\frac{1}{2} + 16\frac{1}{2} = 39 + \frac{3}{4} + \frac{2}{4} + \frac{2}{4} = 39 + \frac{7}{4} = 39 + 1\frac{3}{4} = 40\frac{3}{4}$
 Dumb joke answer: Nothing. They never met.

Clarabell the Computer

Someone made a programming error. Clarabell the computer makes occasional multiplication errors. It's your job to catch them. Circle every error.

$$\begin{array}{r} 1. \quad 39 \\ \quad \times 46 \\ \hline 1794 \end{array}$$

$$\begin{array}{r} 2. \quad 97 \\ \quad \times 63 \\ \hline 6101 \end{array}$$

$$\begin{array}{r} 3. \quad 82 \\ \quad \times 29 \\ \hline 2378 \end{array}$$

$$\begin{array}{r} 4. \quad 24 \\ \quad \times 77 \\ \hline 1848 \end{array}$$

$$\begin{array}{r} 5. \quad 65 \\ \quad \times 34 \\ \hline 2220 \end{array}$$

$$\begin{array}{r} 6. \quad 88 \\ \quad \times 17 \\ \hline 1496 \end{array}$$

$$\begin{array}{r} 7. \quad 53 \\ \quad \times 42 \\ \hline 2216 \end{array}$$

$$\begin{array}{r} 8. \quad 49 \\ \quad \times 84 \\ \hline 4216 \end{array}$$

$$\begin{array}{r} 9. \quad 37 \\ \quad \times 57 \\ \hline 2109 \end{array}$$

$$\begin{array}{r} 10. \quad 79 \\ \quad \times 16 \\ \hline 1264 \end{array}$$

$$\begin{array}{r} 11. \quad 86 \\ \quad \times 58 \\ \hline 4998 \end{array}$$

$$\begin{array}{r} 12. \quad 91 \\ \quad \times 33 \\ \hline 3103 \end{array}$$

$$\begin{array}{r} 13. \quad 63 \\ \quad \times 94 \\ \hline 5922 \end{array}$$

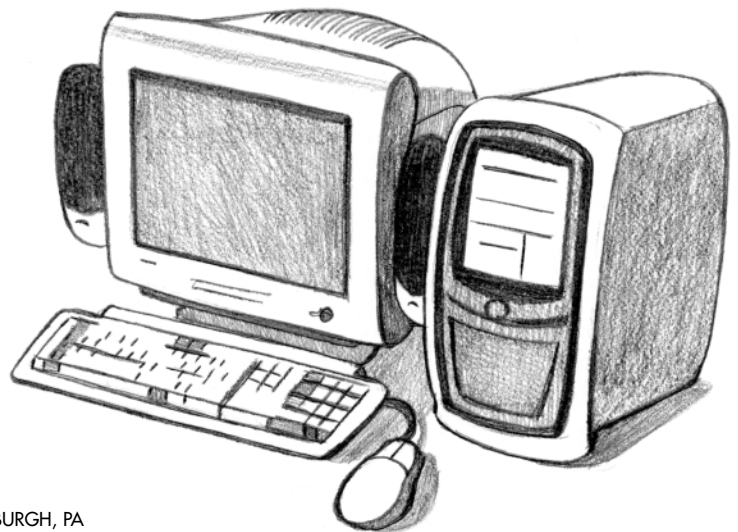
$$\begin{array}{r} 14. \quad 98 \\ \quad \times 99 \\ \hline 9602 \end{array}$$

$$\begin{array}{r} 15. \quad 36 \\ \quad \times 75 \\ \hline 2600 \end{array}$$

$$\begin{array}{r} 16. \quad 43 \\ \quad \times 63 \\ \hline 2709 \end{array}$$

$$\begin{array}{r} 17. \quad 56 \\ \quad \times 85 \\ \hline 4760 \end{array}$$

$$\begin{array}{r} 18. \quad 32 \\ \quad \times 91 \\ \hline 2812 \end{array}$$



What Did This Cow Do?

You can figure out what this cow did by doing all these division problems. Then use the letter code to help you find out what the cow did.

A B C D E F G H I J K L M N
101 187 163 102 116 234 197 139 206 153 199 255 88 632

O P Q R S T U V W X Y Z
350 345 409 489 513 204 217 336 622 555 317 286

$$17 \overline{)3,468} \quad 24 \overline{)3,336} \quad 39 \overline{)4,524}$$

$$34 \overline{)5,542} \quad 46 \overline{)16,100} \quad 53 \overline{)32,966}$$

$$67 \overline{)10,251} \quad 54 \overline{)11,718} \quad 96 \overline{)8,448} \quad 31 \overline{)10,695} \quad 86 \overline{)9,976} \quad 34 \overline{)3,468}$$

$$23 \overline{)8,050} \quad 94 \overline{)31,584} \quad 89 \overline{)10,324} \quad 66 \overline{)32,274}$$

$$36 \overline{)7,344} \quad 43 \overline{)5,977} \quad 71 \overline{)8,236}$$

$$54 \overline{)4,752} \quad 25 \overline{)8,750} \quad 49 \overline{)17,150} \quad 44 \overline{)27,808}$$

