

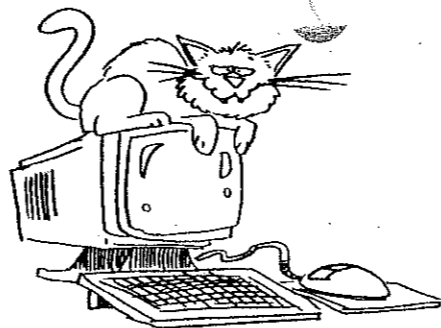


Why Did the Cat Buy a Computer?

 Simplify the expression, if possible, then find your answer below. Write the letter of the exercise in the box that contains the number of the answer. 



Algebra 2 Unit 12, Day 1 Name: _____ Date: _____

H $\frac{3\sqrt{5}a}{5\sqrt{25}a^2} = \frac{3}{5a}$
E $\frac{4\sqrt{16}a^3a^2}{12a^3} = \frac{4a^2}{3}$
A $\frac{ab^2b}{a^2b} = \frac{b}{a}$
I $\frac{21a^5b^4b}{749a^2b^3} = \frac{3a^3b}{7}$
U $\frac{9a^2b^3}{36a^2b^5} = \frac{1}{4b^2}$

E $\frac{x(x+1)}{x^2(x-1)} \cdot \frac{x+k}{x(x-1)}$
T $\frac{x(x+1)}{x^2(x+1)} \cdot \frac{1}{x}$
O $\frac{x^2+1}{x^2(x+1)}$ Cannot be simplified
E $\frac{x^2+1}{x^2(x^2+1)} = \frac{1}{x^2}$
H $\frac{x(x+1)}{x+1} = x$

I $\frac{c^2+cd}{cd} = \frac{c(c+d)}{cd} = \frac{c+d}{d}$
D $\frac{c^2d-cd^2}{cd} = \frac{cd(c-d)}{cd} = \frac{c-d}{c-d} = 1$
H $\frac{7c^2d-2cd^2}{7c-2d} = \frac{cd(7c-2d)}{7c-2d} = cd$
E $\frac{(c+d)(c-d)}{(c+d)(c+d)} = \frac{c-d}{c+d}$
T $\frac{cd(c+d)}{(c+d)(c-d)} = \frac{cd}{c-d}$

W $\frac{(n+2)(m-5)}{m-5} = n+2$
S $\frac{n+2(m-5)}{m-5}$ cannot be simplified
P $\frac{(n+9)(n-4)}{(2n+9)(n-4)} = \frac{n+9}{2n+9}$
L $\frac{9n(n-4)}{4n(n+4)} = \frac{9(n-4)}{4(n+4)}$
T $\frac{9n+4}{(9n+4)(9n-4)} = \frac{1}{9n-4}$

Y $\frac{(w-3)(w-8)}{8w(w-3)} = \frac{w-8}{8w}$
O $\frac{24w^2(w-3)}{8w^3(w-8)}$ cannot be simplified
K $\frac{w-3}{w-3(y-8)}$ cannot be simplified
L $\frac{w-8}{8-w} = \frac{w-8}{-(w-8)} = -1$
M $\frac{w^2(w-3)}{3-w} = \frac{w^2(w-3)}{-1(w-3)} = -w^2$

- Answers**
- 5 $\frac{3a^3b}{7}$
 - 7 $\frac{4a^2}{3}$
 - 21 $\frac{3}{5a}$
 - 27 $\frac{3a^2}{7b}$
 - 29 $\frac{1}{4b^2}$
 - 15 $\frac{b}{a}$
 - 17 cannot be simplified

- Answers**
- 23 $\frac{1}{x}$
 - 9 $\frac{x+1}{x}$
 - 24 x
 - 2 $\frac{x+1}{x(x-1)}$
 - 31 $\frac{1}{x^2}$
 - 26 $\frac{x}{x+1}$
 - 11 cannot be simplified

- Answers**
- 8 $c-d$
 - 25 $\frac{c-d}{c+d}$
 - 3 $\frac{cd}{c+d}$
 - 19 $\frac{c+d}{d}$
 - 10 $\frac{cd}{c-d}$
 - 1 cd
 - 14 cannot be simplified

- Answers**
- 17 $\frac{1}{9n+4}$
 - 18 $n+2$
 - 13 $\frac{n+9}{2n+9}$
 - 22 $\frac{n}{n+9}$
 - 20 $\frac{1}{9n-4}$
 - 4 $\frac{9(n-4)}{4(n+4)}$
 - 30 cannot be simplified

- Answers**
- 27 $-w^2$
 - 28 $\frac{8(w-3)}{w(w-8)}$
 - 14 -1
 - 12 $\frac{w^2}{w-8}$
 - 26 $\frac{w}{7}$
 - 16 $\frac{w-8}{8w}$
 - 6 cannot be simplified

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
H	E		L	I	K	E	D		T	O		P	L	A	Y	W	I	T	H			T	H	E		M	O	U	S	E

What Do You Get When You Cross ...

- 1 A computer with a shark?** K I L L E R B I T E S
11 4 15 15 2 5 7 16 4 14 2 13
- 2 A vampire with a teacher?** A B L O O D T E S T
3 7 16 15 6 6 12 10 14 2 13 14
- 3 A whale with a video store?** M O B Y D I S C
9 6 16 1 10 12 4 13 8

Simplify the expression, then find your answer. Each time the exercise number appears in the code, write the letter of the answer above it. If the answer has a , leave the space blank.

1 $\frac{5 - m}{3m - 15}$

answers 1-4

L $-\frac{1}{4}$

2 $\frac{4m - 14}{7 - 2m}$

E -2

3 $\frac{m + 3}{9 - m^2}$

$-\frac{3}{m + 3}$

4 $\frac{64 - m^2}{m - 8}$

Y $-\frac{1}{3}$

V $-\frac{m - 8}{2}$

A $-\frac{1}{m - 3}$

5 $\frac{-x^2 + 5x - 6}{x - 2}$

answers 5-8

$-\frac{x + 5}{3x}$

6 $\frac{x^2 - x - 20}{10 - 2x}$

S $-\frac{x + 3}{2}$

7 $\frac{-x^2 - 10x - 25}{3x^2 + 15x}$

R $-(x - 3)$

H $-\frac{x - 5}{3}$

8 $\frac{-x^2 - 4x + 12}{4 - x^2}$

C $\frac{x + 6}{x + 2}$

O $-\frac{x + 4}{2}$

W $\frac{x + 4}{x - 2}$

9 $\frac{15 - 2b - b^2}{b - 3}$

answers 9-12

T $\frac{3b}{b + 3}$

10 $\frac{2b - 18}{18 + 7b - b^2}$

G $-\frac{b + 7}{5b}$

11 $\frac{49 - b^2}{5b^3 + 35b^2}$

D $\frac{3b^2}{b - 3}$

$-\frac{2}{b + 2}$

12 $\frac{6b^3 - 3b^2}{3 - 7b + 2b^2}$

U $-\frac{b + 1}{b - 2}$

M $-(b + 5)$

K $-\frac{b - 7}{5b^2}$

13 $\frac{7 + 6t - t^2}{t^2 + 12t + 11}$

answers 13-16

N $-\frac{3t - 1}{t - 6}$

14 $\frac{3t^2 - 10t + 3}{24 - 5t - t^2}$

S $-\frac{t - 7}{t + 11}$

15 $\frac{5 - 24t - 5t^2}{1 - 25t^2}$

F $\frac{t - 5}{t + 5}$

B $-\frac{2}{3}$

16 $\frac{-6t^3 - 24t}{9t^3 + 36t}$

L $\frac{t + 5}{5t + 1}$

P $-\frac{2t}{9}$

T $-\frac{3t - 1}{t + 8}$

Simplifying Rational Expressions

"What Do You Get When You Cross...." Worksheet

$$\textcircled{1} \frac{5-m}{3m-15} = \frac{-1(m-5)}{3(m-5)} = -\frac{1}{3} \textcircled{Y}$$

$$\textcircled{2} \frac{4m-14}{7-2m} = \frac{2(2m-7)}{-1(2m-7)} = -2 \textcircled{E}$$

$$\textcircled{3} \frac{m+3}{9-m^2} = \frac{m+3}{-1(m^2-9)} = \frac{m+3}{-1(m+3)(m-3)} = \frac{1}{-1(m-3)} = -\frac{1}{m-3} \textcircled{A}$$

$$\textcircled{4} \frac{64-m^2}{m-8} = \frac{-1(m^2-64)}{m-8} = \frac{-1(m+8)(m-8)}{m-8} = -(m+8) \textcircled{J}$$

$$\textcircled{5} \frac{-x^2+5x-6}{x-2} = \frac{-1(x^2-5x+6)}{x-2} = \frac{-1(x-3)(x-2)}{(x-2)} = -(x-3) \textcircled{R}$$

$$\textcircled{6} \frac{x^2-x-20}{10-2x} = \frac{x^2-x-20}{-2(x-5)} = \frac{(x-5)(x+4)}{-2(x-5)} = -\frac{(x+4)}{2} \textcircled{O}$$

$$\textcircled{7} \frac{-x^2-10x-25}{3x^2+15x} = \frac{-1(x^2+10x+25)}{3x(x+5)} = \frac{-1(x+5)(x+5)}{3x(x+5)} = -\frac{(x+5)}{3x} \textcircled{B}$$

$$\textcircled{8} \frac{-x^2-4x+12}{4-x^2} = \frac{-1(x^2+4x-12)}{-1(x^2-4)} = \frac{(x+6)(x-2)}{(x+2)(x-2)} = \frac{x+6}{x+2} \textcircled{C}$$

$$\textcircled{9} \frac{15-2b-b^2}{b-3} = \frac{-1(b^2+2b-15)}{b-3} = \frac{-1(b+5)(b-3)}{b-3} = -(b+5) \textcircled{M}$$

$$\textcircled{10} \frac{2b-18}{18+7b-b^2} = \frac{2(b-9)}{-1(b^2-7b-18)} = \frac{2(b-9)}{-1(b-9)(b+2)} = -\frac{2}{b+2} \textcircled{F}$$

$$\textcircled{11} \frac{49-b^2}{5b^3+35b^2} = \frac{-1(b^2-49)}{5b^2(b+7)} = \frac{-1(b+7)(b-7)}{5b^2(b+7)} = -\frac{b-7}{5b^2} \textcircled{K}$$

 STAEDTLER
 Engineer's Computation Pad

Simplifying Rational Expressions Continued

$$\textcircled{12} \frac{6b^3 - 3b^2}{3 - 7b + 2b^2} = \frac{6b^3 - 3b^2}{2b^2 - 7b + 3} = \frac{3b^2(2b-1)}{(2b-1)(b-3)} = \frac{3b^2}{b-3} \textcircled{D}$$

$$\textcircled{13} \frac{7 + 6t - t^2}{t^2 + 12t + 11} = \frac{-1(t^2 - 6t - 7)}{t^2 + 12t + 11} = \frac{-1(t-7)(t+1)}{(t+1)(t+11)} = -\frac{t-7}{t+11} \textcircled{S}$$

$$\textcircled{14} \frac{3t^2 - 10t + 3}{24 - 5t - t^2} = \frac{3t^2 - 10t + 3}{-1(t^2 + 5t - 24)} = \frac{(3t-1)(t-3)}{-1(t+8)(t-3)} = -\frac{3t-1}{t+8} \textcircled{T}$$

$$\textcircled{15} \frac{5 - 24t - 5t^2}{1 - 25t^2} = \frac{-1(5t^2 + 24t - 5)}{-1(25t^2 - 1)} = \frac{(5t-1)(t+5)}{(5t+1)(5t-1)} = \frac{t+5}{5t+1} \textcircled{L}$$

$$\textcircled{16} \frac{-6t^3 - 24t}{9t^3 + 36t} = \frac{-6t(t^2 + 4)}{9t(t^2 + 4)} = -\frac{6}{9} = -\frac{2}{3} \textcircled{B}$$