



Puzzle Time

What Part Of A Computer Keyboard Do Astronauts Like The Best?

Write the letter of each answer in the box containing the exercise number.

Tell whether x and y show *direct variation*, *inverse variation*, or *neither*.

1. $xy = 3$

2. $x + y = 12$

3. $\frac{y}{x} = 6$

The variables x and y vary inversely. Use the given values to write an equation relating x and y .

4. $x = 5, y = -2$

5. $x = 8, y = 2$

6. $x = \frac{1}{2}, y = 6$

7. $x = -12, y = \frac{2}{3}$

8. $x = -\frac{1}{3}, y = -\frac{9}{2}$

9. $x = 2, y = -\frac{3}{4}$

10. $x = -2.4, y = 8.6$

11. $x = -15, y = -\frac{2}{5}$

Answers

P. $y = \frac{16}{x}$

T. inverse variation

S. $y = -\frac{10}{x}$

R. $y = \frac{6}{x}$

E. direct variation

A. $y = \frac{3}{x}$

A. $y = -\frac{20.64}{x}$

C. $y = -\frac{8}{x}$

E. $y = \frac{3}{2x}$

H. neither

B. $y = -\frac{3}{2x}$

1	2	3		4	5	6	7	8		9	10	11
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Puzzle Time

What Is Black And White And Red All Over?

Write the letter of each answer in the box containing the exercise number.

Simplify the expression, if possible.

1. $\frac{45}{10x - 15}$

2. $\frac{x - 7}{x^2 - 3x - 28}$

3. $\frac{2x}{3x^2 + 8}$

Find the product or quotient.

4. $\frac{y}{x^2 - 1} \cdot \frac{x - 1}{2y}$

5. $\frac{3x}{x + 1} \cdot (x^2 + 2x + 1)$

6. $\frac{(x + 3)}{(x + 2)} \div \frac{(x - 1)(x + 3)}{(x - 1)^2}$

7. $\frac{1}{x + 9} \div \frac{6 - x}{3x - 18}$

8. $\frac{10x^2yz^4}{5xy^3} \div 2x^5y^2z$

9. $\frac{x - 8}{x^2 - 2x - 48} \cdot \frac{4x^2 + 40x}{x + 10}$

10. $\frac{1}{5x^2} \div \frac{9x - 36}{5x^3 - 35x^2}$

Answers

E. $\frac{4x}{x + 6}, x \neq -10, x \neq 8$

S. $3x(x + 1), x \neq -1$

A. $\frac{9}{2x - 3}$

P. $\frac{z^3}{x^4y^4}, z \neq 0$

N. $\frac{1}{x + 4}, x \neq 7$

W. $\frac{1}{2(x + 1)}, x \neq 1, y \neq 0$

P. $\frac{x - 1}{x + 2}, x \neq -3, x \neq 1$

R. $\frac{x - 7}{9(x - 4)}, x \neq 0, x \neq 7$

E. $\frac{2x}{3x^2 + 8}$

A. $-\frac{3}{x + 9}, x \neq 6$

1		2	3	4	5	6	7	8	9	10
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