Direct and Inverse Variation

Determine whether the given equation represents a direct or inverse variation.

1) $xy = 15$

2) $y = \frac{9}{x}$

3) $y = \frac{13}{12x}$

4) $y = 13x$

5) $-5x + y = 0$

6) $y = 4x$

Find the constant of variation.

7) $y = 3x$

8) $xy = 7$

9) $\frac{y}{x} = 5$

10) $y = \frac{1}{9x}$

11) $y = \frac{3}{5}x$

12) $y = \frac{15}{x}$

Direct and Inverse Variations … Set 2

Answers

Determine whether the given equation represents a direct or inverse variation.

1) $xy = 15$

Inverse

2) $y = \frac{9}{x}$

Inverse

3) $y = \frac{13}{12x}$

Inverse

4) $y = 13x$

Direct

5) $-5x + y = 0$

Direct

6) $y = 4x$

Direct

Find the constant of variation.

7) $y = 3x$

3

8) $xy = 7$

7

9) $\frac{y}{x} = 5$

5

10) $y = \frac{1}{9x}$

$\frac{1}{9}$

11) $y = \frac{3}{5}x$

$\frac{3}{5}$

12) $y = \frac{15}{x}$

15

Direct and Inverse Variations … Set 2

Solve each problem involving direct or inverse variation.

13) If y varies directly as x, and $y = 6$ when $x = 15$, find y when $x = 2$.

14) If y varies inversely as x, and $y = 8$ when $x = 5$, find y when $x = 4$.

15) If y varies directly as x, and $y = 5$ when $x = 4$, find y when $x = 8$.

16) If y varies directly as x^2, and $y = 10$ when $x = 2$, find y when $x = 3$.

17) If y varies inversely as x, and $y = 9$ when $x = 10$, find y when $x = 5$.

18) If y varies inversely as x, and $y = 4$ when $x = 12$, find y when $x = 2$.

19) If y varies inversely as x, and $y = 3$ when $x = 21$, find y when $x = 9$.

20) If y varies inversely as x^2, and $y = \frac{11}{4}$ when $x = 4$, find y when $x = 2$.

21) If y varies directly as x, and $y = 10$ when $x = 20$, find y when $x = 3$.

22) If y varies directly as x, and $y = 4$ when $x = 6$, find y when $x = 5$.

Direct and Inverse Variations … Set 2

Answers

Solve each problem involving direct or inverse variation.

13) If y varies directly as x, and $y = 6$ when $x = 15$, find y when $x = 2$.

$\frac{4}{5}$

14) If y varies inversely as x, and $y = 8$ when $x = 5$, find y when $x = 4$.

10

15) If y varies directly as x, and $y = 5$ when $x = 4$, find y when $x = 8$.

10

16) If y varies directly as x^2, and $y = 10$ when $x = 2$, find y when $x = 3$.

$\frac{45}{2}$

17) If y varies inversely as x, and $y = 9$ when $x = 10$, find y when $x = 5$.

18

18) If y varies inversely as x, and $y = 4$ when $x = 12$, find y when $x = 2$.

24

19) If y varies inversely as x, and $y = 3$ when $x = 21$, find y when $x = 9$.

7

20) If y varies inversely as x^2, and $y = \frac{11}{4}$ when $x = 4$, find y when $x = 2$.

11

21) If y varies directly as x, and $y = 10$ when $x = 20$, find y when $x = 3$.

$\frac{3}{2}$

22) If y varies directly as x, and $y = 4$ when $x = 6$, find y when $x = 5$.

$\frac{10}{3}$