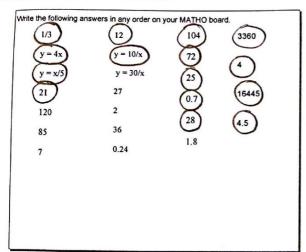
September 14, 2016

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Feb 3-2:00 PM

Feb 3-2:03 PM

The number (b) of bolts a machine can make varies <u>directly</u> as the time (t) it operates. It can make 6578 bolts in 2 hours. How many bolts can it make in 5 hours?

$$b = Kt$$

 $6578 = K(2)$
 $K = 3289$
 $b = 3289(5)$
 16445

Feb 3-2:04 PM

It takes 4 hours for 9 cooks to prepare a school lunch. How long would it take 8 cooks to prepare the lunch? (This is an <u>inverse</u> variation. t = time, c = cooks)

$$t = \frac{K}{C}$$
 $t = \frac{36}{C}$
 $t = \frac{36}{8}$
 $t = 36$
 $t = 4.5$

Feb 3-2:04 PM

Find an equation of joint variation. Then solve for the missing value.

m varies jointly as n and p. One set of values is m = 60 when n = 4 and p = 5. Find m when n = 12 and p = 2.

mom when
$$n = 12$$
 and $p = 2$.
 $M = 3$ M $M = 3$ M M M M M M

Feb 3-2:04 PM

The amount (a) that a family gives to charity varies <u>directly</u> as its income (i). Last year, the family earned \$32,000 and gave \$2560 to charity. How much will they give if they make \$42,000 this year?

$$a = K($$
 $2560 = K(32,000)$
 $K = .08$
 $0 = .08(42,000)$
 $0 = .08(42,000)$

Feb 3-2:04 PM

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Find an equation of combined variation. Then solve for the missing value.

d varies directly as e and inversely as f. One set of values is d = 10 when e = 4 and f = 2. Find d when e = 50 and f = 10.

$$10 = K(4)$$

$$d = 25$$

Feb 3-2:04 PM

September 14, 2016

Find an equation of variation where y varies directly as x, and the following are true

Feb 3-2:04 PM

Find an equation of combined variation. Then solve for the missing value

$$Z = KX$$

$$(6 = K(32))$$

$$Z = .2(28)$$

$$16 = \frac{K(32)}{0.4}$$

Feb 3-2:04 PM

Find k where y varies inversely as x.

y = 2 when x = 6

Feb 3-2:04 PM

The current (I) in an electrical conductor varies inversely as the resistance (r) of the conductor.

The current is 2 amperes when the resistance is 960 ohms. What is the current when the resistance is 480 ohms?

$$2 = \frac{k}{960}$$

Feb 3-2:04 PM

Find an equation of variation where y varies directly as x, and the following are true.

y = 2 when x = 10

Feb 3-2:04 PM

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Assume y varies directly as x.
$$y = 12$$
 when $x = 4$. Find y when $x = 7$.

$$|2 = K(4)|$$

$$|4 = 3$$

$$|4 = 3(7)|$$

$$|4 = 2|$$

Feb 3-2:05 PM

September 14, 2016

Find an equation of joint variation. Then solve for the missing value.

a varies jointly as b and c. One set of values is a = 86.4 when b = 9 and c = 12. Find a when b = 20 and c = 6.5

$$a = Kbc$$

 $86.4 = K(9)(12)$
 $K = .8$
 $a = .8bc$
 $a = .8(20)(6.5)$
Feb 3-2:05 PM

The volume (v) of a cone varies jointly as the height (h) of the cone and the area of the base (b). A cone has a volume of 140 with height 15 and base 28. Find the volume of a cone with height 7 and base 12.

$$V = Khb$$
 $140 = K(15)(28)$
 $K = \frac{1}{3}$
 $V = \frac{1}{3}(7)(12)$
 $V = 28$

Feb 3-2:05 PM

Find an equation of variation where y varies inversely as x.

$$5 = \frac{K}{X}$$

$$5 = \frac{K}{2}$$

$$K = 10$$

Feb 3-2:05 PM

Assume y varies directly as x.

y = 80 when x = 8. Find y when x = 12.

$$y=Kx$$
 $y=10(12)$
80 = K(8) $y=120$
 $K=10$

Feb 3-2:05 PM

$$a = \frac{Kr}{i}$$

$$a = \frac{9r}{i}$$

$$2.55 = \frac{(85)}{300}$$

$$a = \frac{9(120)}{600}$$

$$a = 1.8$$

Feb 3-2:05 PM

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Assume y varies directly as x.

y = 51 when x = 3. Find y when x = 5.

$$y=Kx$$
 $y=17(5)$
 $51=K(3)$ $y=85$
 $k=17$

Feb 3-2:05 PM

Assume y varies inversely as x.

y = 0.3 when x = 4. Find y when x = 5.

$$y = \frac{1}{2}$$
 $y = \frac{1}{2}$
 $0.3 = \frac{1}{4}$
 $y = 0.24$
 $1 = \frac{1}{2}$

Feb 3-2:06 PM

Assume y varies directly as x.

y = 6 when x = 12. Find y when x = 14.

$$y = Kx$$
 $y = \frac{1}{2}x$
 $6 = K(12)$ $y = \frac{1}{2}(14)$
 $K = \frac{1}{2}$ $y = 7$

Feb 3-2:06 PM

Find an equation of variation where y varies inversely as x.

y = 3 when x = 10

$$y = \frac{k}{x}$$
 $y = \frac{30}{x}$
 $3 = \frac{10}{10}$
 $k = 30$

Feb 3-2:08 PM

Assume y varies inversely as x.

y = 9 when x = 12. Find y when x = 3.

$$y = \frac{108}{x}$$
 $y = \frac{108}{30}$
 $y = \frac{108}{12}$ $y = 36$

Feb 3-2:08 PM

Assume y varies <u>inversely</u> as x.

y = 9 when x = 6. Find y when x = 2.

$$y = \frac{1}{2}$$
 $y = \frac{54}{2}$
 $9 = \frac{1}{6}$
 $y = 27$
 $1 = \frac{1}{6}$
 $1 = \frac{1}{6}$

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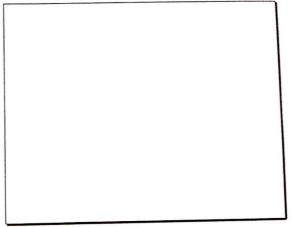
September 14, 2016

Assume y varies inversely as x.

y = 4 when x = 6. Find y when x = 12.

$$y = \frac{1}{x}$$
 $y = \frac{24}{12}$
 $4 = \frac{1}{6}$ $y = 2$
 $k = 24$

Feb 3-2:09 PM



Feb 3-2:14 PM