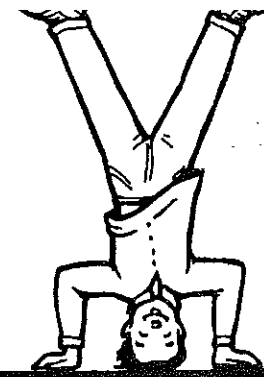


When Might You Think You're Built Upside Down?



Do each exercise below and find your answer in one of the boxes at the bottom of the page. Write the letter of the exercise in that box. (To help you locate each answer quickly, the answers are arranged in order from smallest to largest.)

$$\textcircled{S} \quad -5(-1 + 6)$$

$$\textcircled{U} \quad \frac{8(-3)}{-6}$$

$$\textcircled{E} \quad \frac{-380}{38} + \frac{380}{-38}$$

$$\textcircled{M} \quad (2)(-2) + (5)(6)$$

$$\textcircled{E} \quad \frac{-15}{15} + \frac{150}{15}$$

$$\textcircled{U} \quad (-1)(-7)^2$$

$$\textcircled{L} \quad (-3)(7)(-2)(5)$$

$$\textcircled{E} \quad (-2)^4$$

$$\textcircled{N} \quad (-3)^2(-2)^3$$

$$\textcircled{D} \quad \frac{-6 + (-3) + (-7)}{4}$$

$$\textcircled{W} \quad -5 \cdot 2 \cdot 53$$

$$\textcircled{R} \quad -8 + 17 + (-3)$$

$$\textcircled{R} \quad \frac{-72}{8} + \frac{-56}{7}$$

$$\textcircled{O} \quad (-3 \cdot 7) + (-2 \cdot 4)$$

$$\textcircled{A} \quad \frac{170}{-10} + \frac{96}{12}$$

$$\textcircled{L} \quad (-30)^2$$

$$\textcircled{N} \quad (-3)(-12)(-1)$$

$$\textcircled{F} \quad \frac{-60}{-3} + \frac{-48}{4}$$

$$\textcircled{S} \quad -1(-6) + 8(-2)$$

$$\textcircled{E} \quad (-9)^2(-1)^5$$

$$\textcircled{H} \quad (-8)(-1)(4)(-3)$$

$$\textcircled{T} \quad \frac{9(-4)}{-2}$$

$$\textcircled{N} \quad \frac{-32}{2} + \frac{-75}{-15}$$

$$\textcircled{O} \quad -7 + 8 + (-9) + 10$$

$$\textcircled{E} \quad (-7)(5)(-4)$$

$$\textcircled{U} \quad \frac{-9 \cdot 5}{3}$$

$$\textcircled{Y} \quad (-2)(-3) + (-1)(7)$$

$$\textcircled{Y} \quad (-4)^3$$

$$\textcircled{S} \quad \frac{(-4)(-25)}{5}$$

$$\textcircled{N} \quad \frac{-19 + (-11)}{6}$$

$$\textcircled{R} \quad 80 + (-50) + (-70)$$

$$\textcircled{O} \quad -2(-5)(-6)$$

	-530	-96	-81	-72	-64	-60	-49	-40	-36	-29	-25	-20	-17	-15	-11	-10	
	-9	-5	-4	-1	2	4	6	8	9	16	18	20	26	140	210	900	

13) 112 minutes is 76% of what?

14) What is 16% of 43 minutes?

15) \$73 is what percent of \$125?

16) What is 90% of 130 inches?

17) What is 68% of 118 tons?

18) What percent of 180.4 minutes is 25.7 minutes?

19) 16 inches is 35% of what?

20) 90% of 54.4 hours is what?

21) 140 ft is 97% of what?

22) What is 170% of 97 tons?

23) What is 103% of 127 tons?

24) 102 hours is 94% of what?

Solving Proportions

Solve each proportion.

1) $\frac{10}{8} = \frac{n}{10}$

2) $\frac{7}{5} = \frac{x}{3}$

3) $\frac{9}{6} = \frac{x}{10}$

4) $\frac{7}{n} = \frac{8}{7}$

5) $\frac{4}{3} = \frac{8}{x}$

6) $\frac{7}{b+5} = \frac{10}{5}$

7) $\frac{6}{b-1} = \frac{9}{7}$

8) $\frac{4}{m-8} = \frac{8}{2}$

9) $\frac{5}{6} = \frac{7n+9}{9}$

10) $\frac{4}{9} = \frac{r-3}{6}$

$$11) \frac{7}{9} = \frac{b}{b-10}$$

$$12) \frac{9}{k-7} = \frac{6}{k}$$

$$13) \frac{4}{n+2} = \frac{7}{n}$$

$$14) \frac{n}{n-3} = \frac{2}{3}$$

$$15) \frac{x-3}{x} = \frac{9}{10}$$

$$16) \frac{5}{r-9} = \frac{8}{r+5}$$

$$17) \frac{p+10}{p-7} = \frac{8}{9}$$

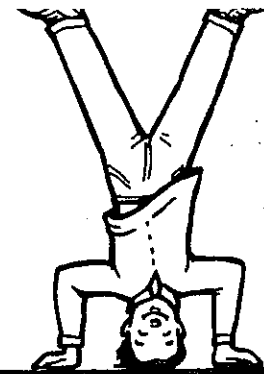
$$18) \frac{2}{8} = \frac{n+4}{n-4}$$

$$19) \frac{n-5}{n+8} = \frac{2}{7}$$

$$20) \frac{n-6}{n-7} = \frac{9}{2}$$

When Might You Think You're Built Upside Down?

KEY



Do each exercise below and find your answer in one of the boxes at the bottom of the page. Write the letter of the exercise in that box. (To help you locate each answer quickly, the answers are arranged in order from smallest to largest.)

(S) $-5(-1+6) = -25$

(N) $(-3)^2(-2)^3 = -72$

(N) $(-3)(-12)(-1) = -36$

(E) $(-7)(5)(-4) = 140$

(U) $\frac{8(-3)}{-6} = 4$

(D) $\frac{-6+(-3)+(-7)}{4} = -4$

(F) $\frac{-60}{-3} + \frac{-48}{4} = 8$

(U) $\frac{-9 \cdot 5}{3} = -15$

(E) $\frac{-380}{38} + \frac{380}{-38} = -20$

(W) $-5 \cdot 2 \cdot 53 = -530$

(S) $-1(-6) + 8(-2) = -10$

(Y) $(-2)(-3) + (-1)(7) = -1$

(M) $(2)(-2) + (5)(6) = 26$

(R) $-8 + 17 + (-3) = 6$

(E) $(-9)^2(-1)^5 = -81$

(Y) $(-4)^3 = -64$

(E) $\frac{-15}{15} + \frac{150}{15} = 9$

(R) $\frac{-72}{8} + \frac{-56}{7} = -17$

(H) $(-8)(-1)(4)(-3) = -96$

(S) $\frac{(-4)(-25)}{5} = 20$

(U) $(-1)(-7)^2 = -49$

(O) $(-3 \cdot 7) + (-2 \cdot 4) = -29$

(T) $\frac{9(-4)}{-2} = 18$

(N) $\frac{-19 + (-11)}{6} = -5$

(L) $(-3)(7)(-2)(5) = 210$

(A) $\frac{170}{-10} + \frac{96}{12} = -9$

(N) $\frac{-32}{2} + \frac{-75}{-15} = -11$

(R) $80 + (-50) + (-70) = -40$

(E) $(-2)^4 = 16$

(L) $(-30)^2 = 900$

(O) $-7 + 8 + (-9) + 10 = 2$

(O) $-2(-5)(-6) = -60$

	-530	-96	-81	-72	-64	-60	-49	-40	-36	-29	-25	-20	-17	-15	-11	-10	
	W	H	E	N	Y	O	U	R	N	O	S	E	R	U	N	S	
	-9	-5	-4	-1	2	4	6	8	9	16	18	20	26	140	210	900	
	A	N	D	Y	O	U	R	F	E	E	T	S	M	E	L	L	

13) 112 minutes is 76% of what?

$$\frac{112}{x} = \frac{76}{100}$$

$$76x = 11200$$

$$x = 147.4 \text{ minutes}$$

14) What is 16% of 43 minutes?

$$\frac{x}{43} = \frac{16}{100}$$

$$100x = 688$$

$$x = 6.88 \text{ minutes}$$

$$6.9$$

15) \$73 is what percent of \$125?

$$\frac{73}{125} = \frac{x}{100}$$

$$125x = 7300$$

$$x = 58.4\%$$

16) What is 90% of 130 inches?

$$\frac{x}{130} = \frac{90}{100}$$

$$100x = 11700$$

$$x = 117 \text{ inches}$$

17) What is 68% of 118 tons?

$$\frac{x}{118} = \frac{68}{100}$$

$$100x = 8024$$

$$x = 80.24 \text{ tons}$$

18) What percent of 180.4 minutes is 25.7 minutes?

$$\frac{25.7}{180.4} = \frac{x}{100}$$

$$180.4x = 2570$$

$$x = 14.2\%$$

19) 16 inches is 35% of what?

$$\frac{16}{x} = \frac{35}{100}$$

$$35x = 1600$$

$$x = 45.7 \text{ inches}$$

20) 90% of 54.4 hours is what?

$$\frac{x}{54.4} = \frac{90}{100}$$

$$100x = 4896$$

$$x = 48.9$$

$$49.0 \text{ hours}$$

21) 140 ft is 97% of what?

$$\frac{140}{x} = \frac{97}{100}$$

$$97x = 14000$$

$$x = 144.3 \text{ ft}$$

22) What is 170% of 97 tons?

$$\frac{x}{97} = \frac{170}{100}$$

$$100x = 16490$$

$$x = 164.90 \text{ tons}$$

23) What is 103% of 127 tons?

$$\frac{x}{127} = \frac{103}{100}$$

$$100x = 13081$$

$$x = 130.8 \text{ tons}$$

24) 102 hours is 94% of what?

$$\frac{102}{x} = \frac{94}{100}$$

$$94x = 10200$$

$$x = 108.5 \text{ hours}$$

Solving Proportions

Solve each proportion.

1) $\frac{10}{8} = \frac{n}{10}$

$$8n = 100$$

$$n = 12.5$$

2) $\frac{7}{5} = \frac{x}{3}$

$$5x = 21$$

$$x = 4.2$$

3) $\frac{9}{6} = \frac{x}{10}$

$$6x = 90$$

$$x = 15$$

4) $\frac{7}{n} = \frac{8}{7}$

$$8n = 49$$

$$n = 6.125$$

5) $\frac{4}{3} = \frac{8}{x}$

$$4x = 24$$

$$x = 6$$

6) $\frac{7}{b+5} = \frac{10}{5}$

$$10(b+5) = 35$$

$$10b + 50 = 35$$

$$10b = -15$$

$$b = -1.5$$

7) $\frac{6}{b-1} = \frac{9}{7}$

$$9(b-1) = 42$$

$$9b - 9 = 42$$

$$9b = 51$$

$$b = 5.66$$

8) $\frac{4}{m-8} = \frac{8}{2}$

$$8(m-8) = 8$$

$$8m - 64 = 8$$

$$8m = 72$$

$$m = 9$$

9) $\frac{5}{6} = \frac{7n+9}{9}$

$$4(7n+9) = 45$$

$$42n + 54 = 45$$

$$42n = -9$$

$$n = -0.21$$

10) $\frac{4}{9} = \frac{r-3}{6}$

$$9(r-3) = 24$$

$$9r - 27 = 24$$

$$9r = 51$$

$$r = 5.66$$

$$11) \frac{7}{9} = \frac{b}{b-10}$$

$$9b = 7(b-10)$$

$$9b = 7b - 70$$

$$2b = -70$$

$$b = -35$$

$$12) \frac{9}{k-7} = \frac{6}{k}$$

$$9k = 6(k-7)$$

$$9k = 6k - 42$$

$$3k = -42$$

$$k = -14$$

$$13) \frac{4}{n+2} = \frac{7}{n}$$

$$4n = 7(n+2)$$

$$4n = 7n + 14$$

$$-3n = 14$$

$$n = -4.66$$

$$14) \frac{n}{n-3} = \frac{2}{3}$$

$$3n = 2(n-3)$$

$$3n = 2n - 6$$

$$n = -6$$

$$15) \frac{x-3}{x} = \frac{9}{10}$$

$$9x = 10(x-3)$$

$$9x = 10x - 30$$

$$-x = -30$$

$$x = 30$$

$$16) \frac{5}{r-9} = \frac{8}{r+5}$$

$$5(r+5) = 8(r-9)$$

$$5r + 25 = 8r - 72$$

$$97 = 3r$$

$$32.33 = r$$

$$17) \frac{p+10}{p-7} = \frac{8}{9}$$

$$9(p+10) = 8(p-7)$$

$$9p + 90 = 8p - 56$$

$$p = -146$$

$$18) \frac{2}{8} = \frac{n+4}{n-4}$$

$$2(n-4) = 8(n+4)$$

$$2n - 8 = 8n + 32$$

$$-40 = 6n$$

$$-6.66 = n$$

$$19) \frac{n-5}{n+8} = \frac{2}{7}$$

$$7(n-5) = 2(n+8)$$

$$7n - 35 = 2n + 16$$

$$5n = 51$$

$$n = 10.2$$

$$20) \frac{n-6}{n-7} = \frac{9}{2}$$

$$2(n-6) = 9(n-7)$$

$$2n - 12 = 9n - 63$$

$$51 = 7n$$

$$7.28 = n$$