

# Why Was the Pail Pale?



Solve each equation or problem and find your answer at the bottom of the page. Write the letter of the exercise in the box containing its solution.

**E**  $5x + 2x - 9 = 40$

$x = 7$

**T**  $y - 4y + 3 = -30$

$y = 11$

**C**  $6t + 2 + 3t + 17 = 10$

$t = -1$

**A**  $3a - 7a + 12 = 32$

$a = -5$

**L**  $-5u + 4 + 8u = 43$

$u = 13$

**N**  $-k - 6 - 7k + 20 = -2$

$k = 2$

**U**  $\frac{5}{3}x - \frac{4}{3}x - 1 = 8$

$x = 27$

**I**  $-\frac{3}{5}b + 7 + \frac{2}{5}b = 19$

$b = -60$

**T**  $16 - 2n + 5 + 8n = 65$

$n = 9$

**E**  $4p - 13p - p = -150$

$p = 15$

**A**  $35 + \frac{5}{2}y - \frac{1}{2}y = 3$

$y = -16$

**W**  $\frac{1}{8}d - 4 + \frac{3}{8}d - 4 = 5$

$d = 26$

**T**  $\frac{5}{7}m - 2 - \frac{6}{7}m = -13$

$m = 77$

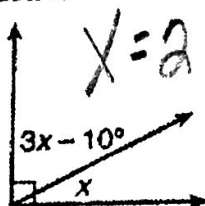
**L**  $v - \frac{9}{10}v + 6 = 11$

$v = 50$

**S**  $70 - q - q - 2q = 80$

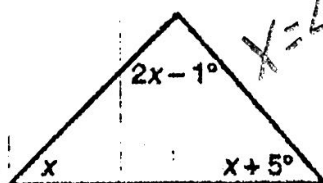
$q = -2.5$

**B** The sum of the measures of two complementary angles is  $90^\circ$ . Find the measure of the angle labeled  $x$ .



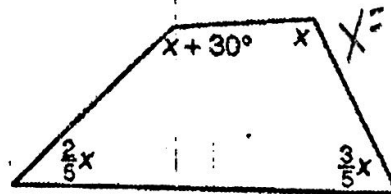
$x = 25^\circ$

**K** The sum of the measures of the three angles of a triangle is  $180^\circ$ . Find the measure of the angle labeled  $x$ .



$x = 44^\circ$

**W** The sum of the measures of the four angles of a quadrilateral is  $360^\circ$ . Find the measure of the angle labeled  $x$ .



$x = 110^\circ$

-60	11	-8	26	-5	-2.5	2	9	36°	-16	31	110°	7	50	13	95°	25°	27	-1	44°	15	77
I	T		W	A	S	N	T		A		W	E	L	L		B	U	C	K	E	T

(E)

$$(5x) + (2x) - 9 = 40$$

$$\begin{array}{r} 7x - 9 = 40 \\ +9 \quad +9 \\ \hline \end{array}$$

$$\frac{7x}{7} = \frac{49}{7}$$

$$x = 7$$

(T)

$$(y) - (4y) + 3 = -30$$

$$\begin{array}{r} -3y + 3 = -30 \\ -3 \quad -3 \\ \hline \end{array}$$

$$\frac{-3y}{-3} = \frac{-33}{-3}$$

$$y = 11$$

(C)

$$(6t) + 2 + (3t) + 17 = 10$$

$$\begin{array}{r} 9t + 19 = 10 \\ -19 \quad -19 \\ \hline \end{array}$$

$$\frac{9t}{9} = \frac{-9}{9}$$

$$t = -1$$

(A)

$$(3a) - (7a) + 12 = 32$$

$$\begin{array}{r} -4a + 12 = 32 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\frac{-4a}{-4} = \frac{20}{-4}$$

$$a = -5$$

(L)

$$(-5u) + 4 + (8u) = 43$$

$$\begin{array}{r} 3u + 4 = 43 \\ -4 \quad -4 \\ \hline \end{array}$$

$$\frac{3u}{3} = \frac{39}{3}$$

$$u = 13$$

(N)

$$(-k) - (6) - (7k) + 20 = -2$$

$$\begin{array}{r} -8k + 14 = -2 \\ -14 \quad -14 \\ \hline \end{array}$$

$$\frac{-8k}{-8} = \frac{-16}{-8}$$

$$k = 2$$

(U)

$$\left(\frac{5}{3}x\right) - \left(\frac{4}{3}x\right) - 1 = 8$$

$$\begin{array}{r} \frac{1}{3}x - 1 = 8 \\ +1 \quad +1 \\ \hline \end{array}$$

$$\left(\frac{3}{1}\right) \frac{1}{3}x \quad \left(9(3)\right)$$

$$x = 27$$

(I)

$$\left(-\frac{3}{5}b\right) + 7 + \left(\frac{2}{5}b\right) = 19$$

$$\begin{array}{r} -\frac{1}{5}b + 7 = 19 \\ -7 \quad -7 \\ \hline \end{array}$$

$$\left(-\frac{5}{1}\right) -\frac{1}{5}b = 12(-5)$$

$$b = -60$$

(T)

$$(16) - 2n - 5 + 8n = 65$$

$$\begin{array}{r} 6n + 11 = 65 \\ -11 \quad -11 \\ \hline \end{array}$$

$$\frac{6n}{6} = \frac{54}{6}$$

$$n = 9$$

E

$$\begin{aligned} 4p - 13p - 1p &= -150 \\ -10p &= -150 \\ \frac{-10p}{-10} &= \frac{-150}{-10} \\ p &= 15 \end{aligned}$$

T

$$\begin{aligned} \frac{5}{7}m - 2 - \frac{6}{7}m &= -13 \\ -\frac{1}{7}m - 2 &= -13 \\ \frac{-\frac{1}{7}m - 2}{+2} &= \frac{-13}{+2} \\ (-7)\frac{-\frac{1}{7}m}{1} &= -11(-7) \\ m &= 77 \end{aligned}$$

B

$$\begin{aligned} 3x - 10 + x &= 90^\circ \\ 4x - 10 &= 90 \\ \frac{4x - 10}{+10} &= \frac{90}{+10} \\ \frac{4x}{4} &= \frac{100}{4} \\ x &= 25^\circ \end{aligned}$$

A

$$\begin{aligned} 35 + \frac{5}{2}y - \frac{1}{2}y &= 3 \\ 2y + \frac{35}{-35} - \frac{3}{-35} &= \frac{3}{-35} \\ \frac{2y}{2} &= \frac{-32}{2} \\ y &= -16 \end{aligned}$$

L

$$\begin{aligned} \frac{1}{10}v - \frac{9}{10}v + 6 &= 11 \\ \frac{1}{10}v + 6 &= 11 \\ \frac{\frac{1}{10}v + 6}{-6} &= \frac{11}{-6} \\ (-10)\frac{\frac{1}{10}v}{1} &= 5(-10) \\ v &= 50 \end{aligned}$$

K

$$\begin{aligned} 1x + 2x + 1 + x + 5 &= 180^\circ \\ 4x + 4 &= 180 \\ \frac{4x + 4}{-4} &= \frac{180}{-4} \\ \frac{4x}{4} &= \frac{176}{4} \\ x &= 44 \end{aligned}$$

W

$$\begin{aligned} \frac{1}{8}d - 4 + \frac{3}{8}d - 4 &= 5 \\ \frac{1}{2}d - 8 &= 5 \\ \frac{\frac{1}{2}d - 8}{+8} &= \frac{5}{+8} \\ (\frac{1}{2})\frac{1}{2}d &= 13(2) \\ d &= 26 \end{aligned}$$

S

$$\begin{aligned} 70 - 1q - 1q - 2q &= 80 \\ -4q + 70 &= 80 \\ \frac{-4q + 70}{-70} &= \frac{80}{-70} \\ -4q &= \frac{10}{-4} \\ \frac{-4q}{-4} &= \frac{10}{-4} \\ q &= -\frac{5}{2} \text{ or } -2.5 \end{aligned}$$

W

$$\begin{aligned} \frac{2}{5}x + x + 30 + x + \frac{3}{5}x &= 360 \\ 3x + 30 &= 360 \\ \frac{3x + 30}{-30} &= \frac{360}{-30} \\ \frac{3x}{3} &= \frac{330}{3} \\ x &= 110 \end{aligned}$$