

Linear Equations Worksheet Answer on lined paper, with setting out!

1. Revision of integer operations

a. $-1 + -3$	b. $4 + 5$	c. $-2 + -9$	d. $-4 + 5$
e. $5 + -2$	f. $-3 + -3$	g. $4 - 3$	h. $-5 - 8$
i. $-3 - -7$	j. $-4 - 9$	k. $-2 - -2$	l. $-5 + 2 - -1$
m. $-3 + 5 - 9$	n. -3×2	o. 5×7	p. -4×-3
q. $5 \div -1$	r. $-16 \div -2$	s. $-2(3 - -4)$	t. $-(4 - 9)$

2. Solve these one and two step equations. Show working.

a. $y + 5 = 6$	b. $5y = 45$	c. $y - 6 = 11$	d. $\frac{a}{3} = 12$
e. $3a + 1 = 22$	f. $5y - 2 = 38$	g. $23 - 2y = 11$	h. $\frac{b}{2} + 5 = 12$
i. $5c - 6 = 7$	j. $4y + 3 = 0$	k. $-3y = 6$	l. $\frac{y}{4} + 1 = -6$
m. $4z - 5 = -3$	n. $-5t = -35$	o. $\frac{5p}{3} = 10$	p. $\frac{p}{2} - 9 = 12$
q. $\frac{y+3}{2} = 8$	r. $\frac{a-3}{2} = 5$	s. $20 - \frac{y}{3} = 16$	t. $\frac{1}{2}y + 3 = 5$

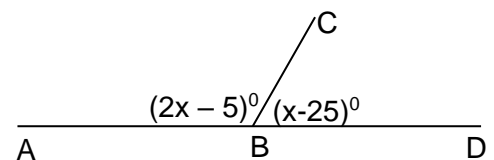
3. Solve these equations with brackets, and with the variable on both sides of the equal sign.

a. $3(y + 5) = 6$	b. $5(y - 3) = 10$	c. $4(y + 2) = 28$	d. $\frac{a+2}{3} = 4$
e. $2(3a + 1) = 14$	f. $3(2y - 2) = 18$	g. $3(3a - 4) = 13$	h. $\frac{b-4}{2} = 6$
i. $5c - 6 = c + 6$	j. $4y + 3 = 5y - 2$	k. $3y = y + 14$	l. $\frac{y-5}{4} = -6$
m. $4z - 5 = 2z - 3$	n. $-5t + 1 = t - 2$	o. $12 - 2y = 5y - 3$	p. $\frac{p+4}{2} = 12$
q. $2(y + 3) = y + 14$	r. $-3(y + 1) = y - 4$	s. $2(y - 3) = 3(y - 2)$	t. $\frac{1}{2}(y + 8) = 12$

4. Word Problems Set your solution out fully.

a. I think of a number, I then subtract 6. I double the result. My final answer is -22 . What was the number?

b. Find the size of the two angles in the diagram alongside.



c. Daniel has twice as much money as Lisa. Krissie has \$20 more than Lisa. Altogether they have \$120. How much money does Krissie have?

Answers: 2. a. $y=1$ b. $y=9$ c. $y=17$ d. $a=36$ e. $a=7$ f. $y=8$ g. $y=6$ h. $b=14$ i. $c=13/5$ j. $y=-3/4$
 k. $y=-2$ l. $y=-28$ m. $z=1/2$ n. $t=7$ o. $p=6$ p. $p=42$ q. $y=13$ r. $a=13$ s. $y=12$ t. $y=4$

3. a. $y=-3$ b. $y=5$ c. $y=5$ d. $a=10$ e. $a=2$ f. $y=4$ g. $a=25/9$ h. $b=16$ i. $c=3$ j. $y=5$ k. $y=7$
 l. $y=-19$ m. $z=1$ n. $t=1/2$ o. $y=15/7$ p. $p=20$ q. $y=8$ r. $y=1/4$ s. $y=0$ t. $y=16$

4. a. -5 b. 135° and 45° c. L: \$25, D: \$50; K: \$45