

# Sort It Out

# Solving Linear Equations

Sort these equations into the four categories given, stating the solution to each equation.

<b>1</b>	$2 = x - 3$	<b>11</b>	$6 - x = 3x + 1$
<b>2</b>	$9 - x = 15$	<b>12</b>	$40 + 5x = 7x - 1$
<b>3</b>	$3x + 1 = 19$	<b>13</b>	$27 - 2x = 4(x + 5)$
<b>4</b>	$8 = 2x - 3$	<b>14</b>	$8(x + 1) = 3(x - 7)$
<b>5</b>	$11 - 4x = 19$	<b>15</b>	$5(3 - x) = 2(x + 8)$
<b>6</b>	$5x + 9 = 2$	<b>16</b>	$2(2x - 1) = 7(7 - x)$
<b>7</b>	$27 = 3(4 + x)$	<b>17</b>	$3(x + 5) - x = 4(7 + x)$
<b>8</b>	$2(2x - 5) = 22$	<b>18</b>	$5(x - 2) + 3(2x + 1) = 20$
<b>9</b>	$6(5 - 3x) = 48$	<b>19</b>	$7(x + 1) - 3(2x - 1) = 5$
<b>10</b>	$7x + 1 = 21 + 2x$	<b>20</b>	$x(4 + x) - x(x - 5) + 9 = 0$

<b>A</b>	The solution to the equation is a positive integer			<b>B</b>	The solution to the equation is a negative integer		
<b>1</b>	$x = 5$	<b>8</b>	$x = 8$	<b>2</b>	$x = -6$	<b>19</b>	$x = -5$
<b>3</b>	$x = 6$	<b>10</b>	$x = 4$	<b>5</b>	$x = -2$	<b>20</b>	$x = -1$
<b>7</b>	$x = 5$			<b>9</b>	$x = -1$		
<b>C</b>	The solution to the equation is a positive fraction			<b>D</b>	The solution to the equation is a negative fraction		
<b>4</b>	$x = \frac{11}{2}$	<b>13</b>	$x = \frac{7}{6}$	<b>6</b>	$x = -\frac{7}{5}$	<b>17</b>	$x = -\frac{13}{2}$
<b>11</b>	$x = \frac{5}{4}$	<b>16</b>	$x = \frac{51}{11}$	<b>14</b>	$x = -\frac{29}{5}$		
<b>12</b>	$x = \frac{41}{2}$	<b>18</b>	$x = \frac{27}{11}$	<b>15</b>	$x = -\frac{1}{7}$		