



Year 8 Worksheet 6: Equations

Question 1: Answer the following.

1	Solve for x : $3x + 7 = 22$ A. $x = 4$ B. $x = 5$ C. $x = 6$ D. $x = 7$
2	Which equation represents "eight less than three times a number is equal to 20"? A. $3x - 8 = 20$ B. $3x + 8 = 20$ C. $8 - 3x = 20$ D. $8 + 3x = 20$
3	Solve for y : $2y/4 = 5$ A. $y = 5/2$ B. $y = 10$ C. $y = 20$ D. $y = 40$
4	If $2y - 3 = 7$, what is the value of y ? A. $y = 2$ B. $y = 5$ C. $y = 7$ D. $y = 8$
5	Which equation represents "three times a number increased by 5 is equal to 17"? A. $3x + 5 = 17$ B. $3x - 5 = 17$ C. $5 - 3x = 17$ D. $5 + 3x = 17$



6	<p>Solve for x: $2(x - 2) = 16$</p> <p>A. $x = 8$ B. $x = 10$ C. $x = 12$ D. $x = 14$</p>
7	<p>If $4(y + 3) = 28$, what is the value of y?</p> <p>A. $y = 2$ B. $y = 4$ C. $y = 5$ D. $y = 6$</p>
8	<p>Which equation represents "five less than twice a number is equal to 11"?</p> <p>A. $2x - 5 = 11$ B. $5 - 2x = 11$ C. $5 - 2x = -11$ D. $2x + 5 = -11$</p>
9	<p>Solve for x: $\frac{3}{4}x = 9$</p> <p>A. $x = 12$ B. $x = 16$ C. $x = 18$ D. $x = 24$</p>
10	<p>If $6(2x - 1) = 42$, what is the value of x?</p> <p>A. $x = 3$ B. $x = 4$ C. $x = 5$ D. $x = 6$</p>



Question 2: Answer the following.

1	Tom has twice as many marbles as Alice. Together, they have 27 marbles. How many marbles does Tom have?
2	Sarah's age is three times her sister's age. If the sum of their ages is 32, how old is Sarah?
3	A rectangular garden is 5 meters longer than it is wide. If half of the perimeter of the garden is 36 meters, what are the dimensions of the garden?
4	The sum of two consecutive even integers is 50. What are the two integers?



5	<p>A shop sells two types of juice: orange juice for \$2.50 per bottle and apple juice for \$3.00 per bottle. If Mary bought 5 bottles of juice for a total of \$13.50, how many bottles of each type did she buy?</p>
6	<p>A swimming pool has a length that is 4 meters less than twice its width. If the perimeter of the pool is 70 meters, find the dimensions of the pool.</p>
7	<p>The sum of two consecutive odd integers is 52. What are the two integers?</p>



8	Jenny's age is three times her son's age. In 15 years, Jenny's age will be twice her son's age. How old are they now?
9	A bakery sells two types of cakes: chocolate cakes for \$8 each and vanilla cakes for \$6 each. If the total revenue from selling 10 cakes is \$68, how many of each type of cake were sold?
10	Lisa's father is 3 times as old as Lisa. In 10 years, Lisa's age will be half of her father's age. How old are they now?



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Answer Key

Question 1: Answer the following.

1	<p>Solve for x: $3x + 7 = 22$</p> <p>A. $x = 4$ B. $x = 5$ C. $x = 6$ D. $x = 7$</p> <p>Answer: B. $x = 5$</p>
2	<p>Which equation represents "eight less than three times a number is equal to 20"?</p> <p>A. $3x - 8 = 20$ B. $3x + 8 = 20$ C. $8 - 3x = 20$ D. $8 + 3x = 20$</p> <p>Answer: A. $3x - 8 = 20$</p>
3	<p>Solve for y: $2y/4 = 5$</p> <p>A. $y = 5/2$ B. $y = 10$ C. $y = 20$ D. $y = 40$</p> <p>Answer: B. $y = 10$</p>
4	<p>If $2y - 3 = 7$, what is the value of y?</p> <p>A. $y = 2$ B. $y = 5$ C. $y = 7$ D. $y = 8$</p> <p>Answer: B. $y = 5$</p>
5	<p>Which equation represents "three times a number increased by 5 is equal to 17"?</p> <p>A. $3x + 5 = 17$ B. $3x - 5 = 17$</p>



	<p>C. $5 - 3x = 17$ D. $5 + 3x = 17$ Answer: A. $3x + 5 = 17$</p>
6	<p>Solve for x: $2(x - 2) = 16$ A. $x = 8$ B. $x = 10$ C. $x = 12$ D. $x = 14$ Answer: B. $x = 10$</p>
7	<p>If $4(y + 3) = 28$, what is the value of y? A. $y = 2$ B. $y = 4$ C. $y = 5$ D. $y = 6$ Answer: B. $y = 4$</p>
8	<p>Which equation represents "five less than twice a number is equal to 11"? A. $2x - 5 = 11$ B. $5 - 2x = 11$ C. $5 - 2x = -11$ D. $2x + 5 = -11$ Answer: A. $2x - 5 = 11$</p>
9	<p>Solve for x: $\frac{3}{4}x = 9$ A. $x = 12$ B. $x = 16$ C. $x = 18$ D. $x = 24$ Answer: A. $x = 12$</p>
10	<p>If $6(2x - 1) = 42$, what is the value of x? A. $x = 3$ B. $x = 4$ C. $x = 5$ D. $x = 6$ Answer: B. $x = 4$</p>



Question 2: Answer the following.

1	Tom has twice as many marbles as Alice. Together, they have 27 marbles. How many marbles does Tom have? Answer: Tom has 18 marbles.
2	Sarah's age is three times her sister's age. If the sum of their ages is 32, how old is Sarah? Answer: Sarah is 24 years old.
3	A rectangular garden is 5 meters longer than it is wide. If half of the perimeter of the garden is 36 meters, what are the dimensions of the garden? Answer: The dimensions of the garden are 6 meters by 30 meters.
4	The sum of two consecutive even integers is 50. What are the two integers? Answer: The two integers are 24 and 26.
5	A shop sells two types of juice: orange juice for \$2.50 per bottle and apple juice for \$3.00 per bottle. If Mary bought 5 bottles of juice for a total of \$13.50, how many bottles of each type did she buy? Answer: Mary bought 3 bottles of orange juice and 2 bottles of apple juice.
6	A swimming pool has a length that is 4 meters less than twice its width. If the perimeter of the pool is 70 meters, find the dimensions of the pool. Answer: The dimensions of the pool are 7 meters by 28 meters.
7	The sum of two consecutive odd integers is 52. What are the two integers? Answer: The two integers are 25 and 27.
8	Jenny's age is three times her son's age. In 15 years, Jenny's age will be twice her son's age. How old are they now? Answer: Jenny is 45 years old, and her son is 15 years old.
9	A bakery sells two types of cakes: chocolate cakes for \$8 each and vanilla cakes for \$6 each. If the total revenue from selling 10 cakes is \$68, how many of each type of cake were sold? Answer: 4 chocolate cakes and 6 vanilla cakes were sold.



10	Lisa's father is 3 times as old as Lisa. In 10 years, Lisa's age will be half of her father's age. How old are they now? Answer: Lisa is 10 years old, and her father is 30 years old.
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