Express Missing Number Problems Algebraically

For each question, expresses the problems algebraically and then solve the problem.

Example:

Twelve more than a number is 34. What is the number?

$$n+12=34 \qquad n= 22$$

Note: With addition, answers can be either way round: n+16=35, 16+n=35; but not subtraction.

1. Ten less than a number is 26. What is the number?

    _____   n= _____

2. 15 is added to a number to make 45. What is the number?

    _____   n= _____

3. Fifteen is subtracted from a number to make 26. What is the number?

    _____   n= _____

4. Seventeen more than a number is 43. What is the number?

    _____   n= _____

5. A number has thirteen added to it to make 42. What is the number?

    _____   n= _____

6. What number has 24 added to it to make 51?

    _____   n= _____

7. What number has nineteen subtracted from it to make twenty-five?

    _____   n= _____

8. 56 is the total of a number and twenty-seven. What is the number?

Challenge
Write some of your own questions for others to work out.

    _____   n= _____

Express Missing Number Problems Algebraically

For each question, ring any expression that expresses the problems algebraically and then solve the problem.

1. A tiler calculates the cost of tiles using the following costs. The tiles are £6 per square metre and £8 delivery. The area is a.

   What formula is used to express this calculation?

   Calculate the cost of tiles covering 7m²

   The builder spends £98 on tiles. What area will the tiles cover?

2. A plumber charges £ 12 per hour and £ 15 for a call-out. The number of hours is h.

   What formula is used to express this calculation?

   Calculate the cost of 3 hours work.

   The plumber charges £99 for a job. How many hours were worked?

3. A decorator charges £15 per hour but offers a £9 discount if his bill is paid immediately.

   What formula is used to express this calculation?

   What formula is used to express this calculation?

   Calculate the cost of 9 hours work.

   The decorator charges £ 96 for a job. How many hours were worked?

4. A wholesaler charges £7 for each box of apples and £6 for delivery. The number of boxes is b.

   What formula is used to express this calculation?

   Calculate the cost of buying 16 boxes of apples.

   The grocer spends £ 17 4 on apples. How many boxes will he have?

5. A gardener has a special offer, charging £ 11 per hour, but offering a £7 discount during July.

   The number of hours is h.

   What formula is used to express this calculation?

   Calculate the cost of 6 hours work.

   The gardener charges £8 1 for a job. How many hours were worked?

Challenge
Write some of your own questions for someone else to solve.
Try these equations and then some of your own: 3h+8, 12a-6 and 9b+15

Express Missing Number Problems Algebraically Answers

For each question, expresses the problems algebraically and then solve the problem.

Example:

Twelve more than a number is 34. What is the number?

$$n+12=34 \qquad n= 22$$

Note: With addition, answers can be either way round: $n+16=35$, $16+n=35$; but not subtraction.

1. Ten less than a number is 26. What is the number?

$$n-10=26 \qquad n= \underline{36}$$

2. 16 is added to a number to make 35. What is the number?

$$n+16=35 \qquad n= \underline{19}$$

3. Fifteen is subtracted from a number to make 26. What is the number?

$$n-15=26 \qquad n= \underline{41}$$

4. Seventeen more than a number is 43. What is the number?

$$n+17=43 \qquad n= \underline{26}$$

5. A number has thirteen added to it to make 42. What is the number?

$$n=13+42 \qquad n= \underline{29}$$

6. What number has 24 added to it to make 51?

$$n+24=51 \qquad n= \underline{27}$$

7. What number has nineteen subtracted from it to make twenty-five?

$$n-19=25 \qquad n= \underline{44}$$

8. 56 is the total of a number and twenty-seven. What is the number?

$$27+n=56 \qquad n= \underline{29}$$

Challenge
Write some of your own questions for others to work out.

Express Missing Number Problems Algebraically Answers

For each question, ring any expression that expresses the problems algebraically and then solve the problem.

1. A tiler calculates the cost of tiles using the following costs. The tiles are £6 per square metre and £8 delivery. The area is a.

   What formula is used to express this calculation? cost= 6a+8

   Calculate the cost of tiles covering 7m² £50

   The builder spends £98 on tiles. What area will the tiles cover? 15m²

2. A plumber charges £ 12 per hour and £ 15 for a call-out. The number of hours is h.

   What formula is used to express this calculation? cost= 12h+15

   Calculate the cost of 3 hours work. £51

   The plumber charges £99 for a job. How many hours were worked? 7 hours

3. A decorator charges £15 per hour but offers a £9 discount if his bill is paid immediately.

   What formula is used to express this calculation? cost= 15h-9

   What formula is used to express this calculation? £126

   Calculate the cost of 9 hours work. 7 hours

   The decorator charges £ 96 for a job. How many hours were worked?

4. A wholesaler charges £7 for each box of apples and £6 for delivery. The number of boxes is b.

   What formula is used to express this calculation? cost=7b+6

   Calculate the cost of buying 16 boxes of apples. £118

   The grocer spends £ 17 4 on apples. How many boxes will he have? 24 boxes

5. A gardener has a special offer, charging £ 11 per hour, but offering a £7 discount during July. The number of hours is h.

   What formula is used to express this calculation? cost=11h-7

   Calculate the cost of 6 hours work. £59

   The gardener charges £8 1 for a job. How many hours were worked? 8 hours

Challenge

Write some of your own questions for someone else to solve.

Try these equations and then some of your own: 3h+8, 12a-6 and 9b+15