

SUPER 12s



SUPER 12s CAN BE USED AS AN INDIVIDUALISED MASTERY LEARNING PROGRAM.

2 ALGEBRA
2.11 SOLVING INEQUALITIES
2.11 LEVEL 2

NAME: _____

Skill description: Writing inequalities from a graphical representation.

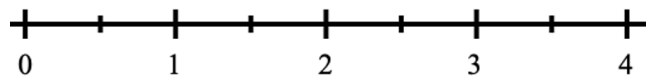
Essential Revision

1. Solve for the unknown.

$$\blacksquare + 13 = 18$$

2. Graph the inequality on the number line.

$$x \geq 2$$

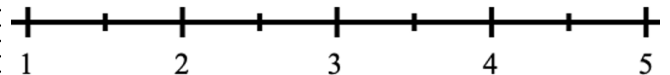


3. Solve for the unknown.

$$\blacksquare + 4 = 12$$

4. Graph the inequality on the number line.

$$x < 3$$

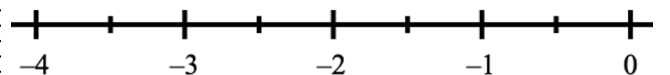


5. Solve for the unknown.

$$\blacksquare + 9 = 21$$

6. Graph the inequality on the number line.

$$x > -2$$

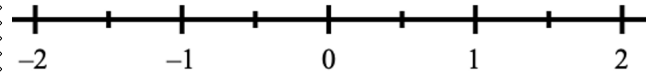


7. Solve for the unknown.

$$\blacksquare + 4 = 7$$

8. Graph the inequality on the number line.

$$x \leq 0$$

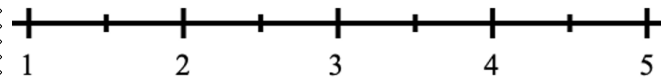


9. Solve for the unknown.

$$\blacksquare + 7 = 31$$

10. Graph the inequality on the number line.

$$x > 3$$

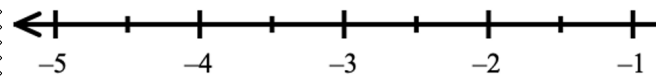


11. Solve for the unknown.

$$\blacksquare + 12 = 17$$

12. Graph the inequality on the number line.

$$x < -3$$



Solutions can be found at the end of the booklet.

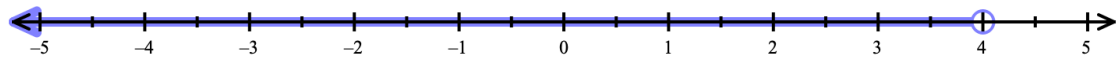
score
12

STRATEGIES TO SOLVE THE PROBLEMS

Writing inequalities from a graphical representation

Example 1

Write the inequality represented by:

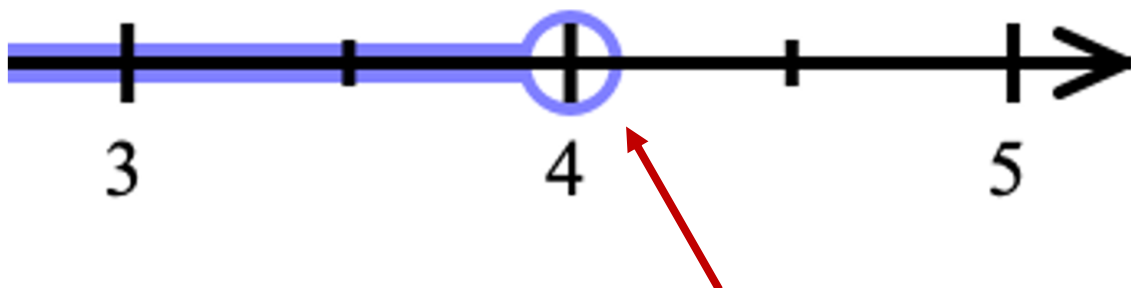


Step 1

Identify the starting number (4).

Step 2

Identify if the starting number equals the variable in the equation.



We can see this example has a hollow circle if we zoom in.

- A **solid circle** indicates the number is equal to the variable, so the equation will be either:

$$\leq \text{ or } \geq$$

- A **hollow circle** indicates the number is **not** equal to the variable, so the equation will be either:

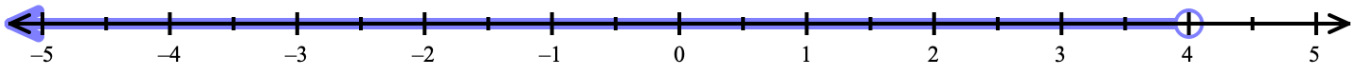
$$< \text{ or } >$$

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Step 3

Identify if the graph represents numbers larger than 4 or less than 4.



The numbers represented by the solid line indicate numbers less than 4.

Final solution

$$x < 4$$



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THESE EXAMPLES.



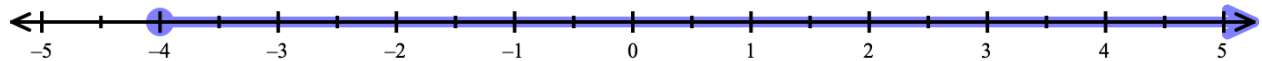
QUESTIONS

Write inequalities for the following.

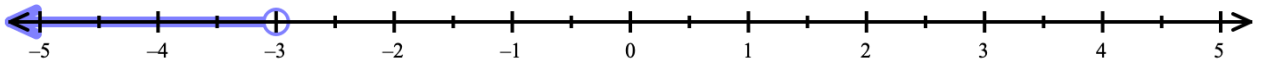
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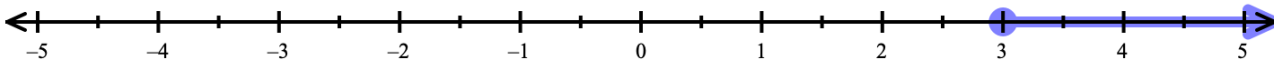
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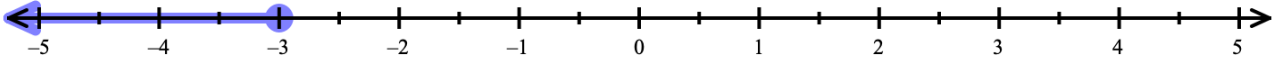
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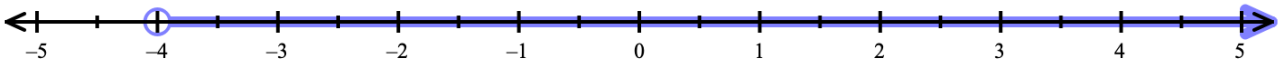
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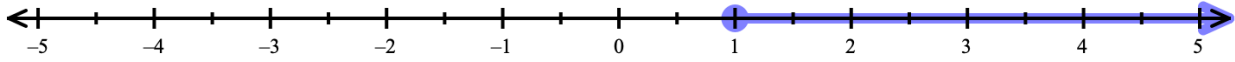
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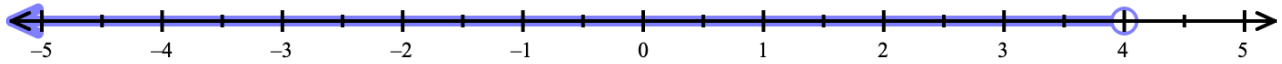
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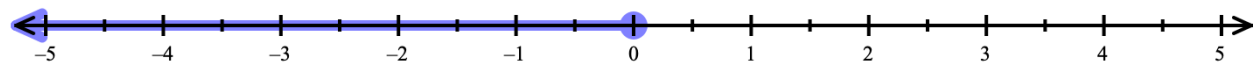
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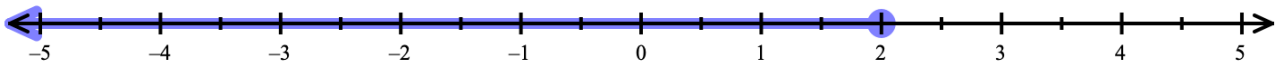
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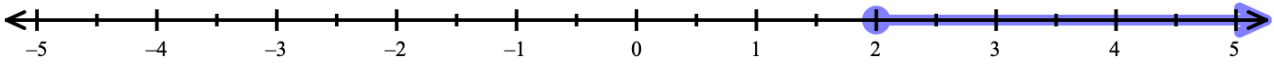
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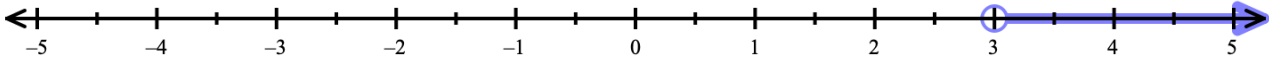
10.



11.



12.



SOLUTIONS CAN BE FOUND AT
THE END OF THE BOOKLET.

score $\frac{\quad}{12}$

MASTERY TEST

Teacher's signature

I'VE COMPLETED

LEVELS THIS YEAR



Solutions to Essential Revision

1. ■ = 5

3. ■ = 8

5. ■ = 12

7. ■ = 3

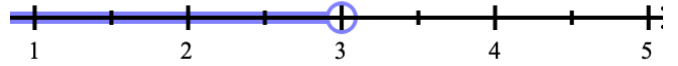
9. ■ = 24

11. ■ = 5

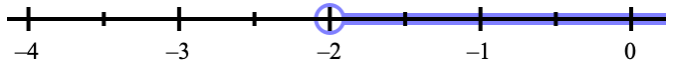
2.



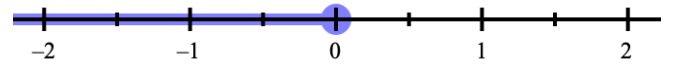
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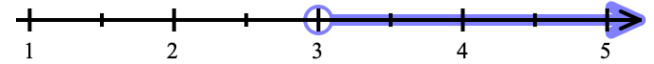
6.



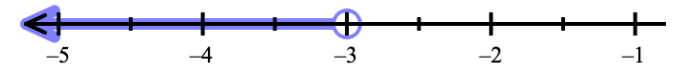
8.



10.



12.



Solutions to Questions

1. $x > -2$

2. $x \geq -4$

3. $x < -3$

4. $x \geq 3$

5. $x \leq -3$

6. $x > -4$

7. $x \geq 1$

8. $x < 4$

9. $x \leq 0$

10. $x \leq 2$

11. $x \geq 2$

12. $x > 3$