

TEACHER'S NAME: NAME: CLASS:

7.1 INEQUALITIES

Notes

- Inequality is the relationship between two different quantitative values.

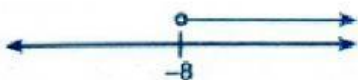
Simbol	Represent
$>$	Greater than
$<$	Smaller than
$\leq$	Greater than or equal
$\geq$	Smaller than or equal

- Symbol $\bullet$ represents in equality $\geq$ or $\leq$.
- Symbol $\circ$ represents in equality $>$ or $<$.

A Fill in the following blanks with $>$ or $<$.

i) 8 12	ii) -20 20
iii) -11 - 13	iv) 0.089 0.098
vi) $\frac{3}{8}$ $\frac{1}{7}$	vi) $-\frac{5}{6}$ -0.9

B Choose the correct answer

a		☐ $x < -8$ ☐ $x \leq -8$ ☐ $x > -8$ ☐ $x \geq -8$
b		☐ $x < 42$ ☐ $x \leq 42$ ☐ $x > 42$ ☐ $x \geq 42$

c		$x < -52$	$x \leq -52$	$x > -52$	$x \geq -52$
d		$x < 3.5$	$x \leq 3.5$	$x > 3.5$	$x \geq 3.5$
e		$x < 225$	$x \leq 225$	$x > 225$	$x \geq 225$

C Fill in the blanks with > or < so that the following statements are true.

a	$\frac{7}{2} > \frac{5}{2}$ $\frac{7}{2} - 8$ $\frac{5}{2} - 8$
b	$\frac{3}{4} < \frac{5}{4}$ $\frac{3}{4} + (-2)$ $\frac{5}{4} + (-2)$
c	$2.4 < 3$ $2.4 - (-4)$ $3 - (-4)$
d	$15 > 2.5$ $15 + (-4)$ $2.5 + (-4)$
e	$0.1 > 0.01$ $0.1 - (-1)$ $0.1 - (-1)$

D Fill in the blanks with > or < so that the following statements are true.

i) $2 < 5$ $2 \times (-1)$ $5 \times (-1)$	ii) $7 > 5$ $7 \times (-1)$ $5 \times (-1)$
--	---

iii) $3.9 < 4.1$ $3.9 \times (-1)$ $4.1 \times (-1)$	iv) $-\frac{1}{9} > -\frac{5}{10}$ $-\frac{1}{9} \times (-1)$ $-\frac{5}{10} \times (-1)$
---	--

E Tick / for the correct statement or X for the opposite.

i) $4 < 5$ $\frac{1}{4} > \frac{1}{5}$ 	ii) $7 > 3$ $\frac{1}{7} > \frac{1}{3}$
iii) $2.6 > 2.06$ $\frac{1}{2.6} > \frac{1}{2.06}$ 	iv) $-\frac{1}{5} > -\frac{1}{4}$

7.2 LINEAR INEQUALITIES IN ONE VARIABLE

Notes

- A linear inequality in one variable is the relationship of one variable that is not equal to its value.

F Form of a linear inequality based on the following situation.

PChoose the correct answer

a	Azlan's minimum salary in a week is RM850. $x > 850$ $x \geq 850$ $x < 850$ $x \leq 850$
b	The price of a novel is RM18. The price for 7 pens is bigger than that. $7x > 18$ $7x \geq 18$ $7x < 18$ $7x \leq 18$
c	The number of passengers on a ferry cannot exceed 40 people. $x > 40$ $x \geq 40$ $x < 40$ $x \leq 40$
d	Suzana's Maths score is over 60 marks $x > 60$ $x \geq 60$ $x < 60$ $x \leq 60$

e	The amount of money given by Salim's parents does not exceed RM 100 to buy books. $x > 100$ $x \geq 100$ $x < 100$ $x \leq 100$
---	---

G Solve each of the following inequalities.

Drag the answer and place it in the answer space.

$p > 1$
 $x \leq -7$
 $x \geq -2$
 $x \geq 13$
 $p < 12$

$x > 36$
 $x \leq -3$
 $x < -3$
 $y \geq 8$

i) $x - 4 \geq 9$	ii) $x + 5 \leq -2$	iii) $p - \frac{1}{3} > \frac{2}{3}$
iv) $\frac{x}{4} > 9$	v) $-\frac{x}{4} \leq \frac{1}{2}$	vi) $8y \geq 64$
vii) $10 - 6x \geq 25 - x$	viii) $2p - 9 < p + 3$	ix) $6 - 5x > 21$

H Solve each of the following inequalities.

a	A container has 21 pieces of biscuits. The container can hold less than 144 pieces of biscuits. Then, the mother and sister each bought $2x$ and x pieces of biscuits to put in the container. Calculate the maximum number of biscuits bought by the mother.
---	--

b	Lee Hong wants to buy several pairs of slippers, each of which costs RM15.30. he wants to pay with RM100 and estimates to get a balance of more than RM56. Calculate the maximum number of slippers he can buy.
---	--

I Solve the following simultaneous linear inequalities

Drag the answer and place it in the answer space.

$p < -4$

$-9 \leq x \leq 2\frac{1}{2}$

$k \geq 8$

$2 < y < 6$

i) $\frac{k}{2} \geq 4$ dan $2k - 3 \geq 5$

ii) $3(4 - y) < 2(y + 1)$ dan $2y - 5 < 7$

ii) $\frac{5-3p}{2} \geq -2$ dan $-\frac{p}{4} > 1$

iv) $3(7 - 2x) \geq 6$ dan $4 - \frac{2}{3}x \leq 10$

J Exercises.

a) Fill in the blanks below with the symbol $>$ or $<$.

Answers:

-8 -1

b) In the answer space, choose X, Y or Z that represents the number line

$-5 < n \leq 11$

X

$-5 \leq n \leq 11$

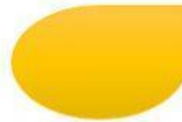
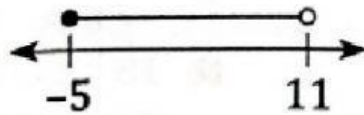
Y

$-5 \leq n < 11$

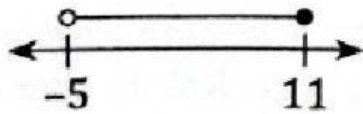
Z

Answer :

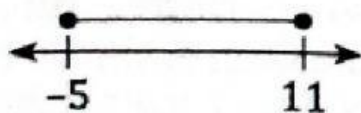
i)



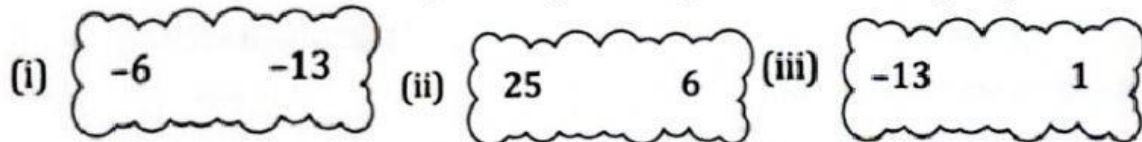
ii)



iii)



c) Fill in the blanks in the answer space using the integers in the following diagram.



Answer:

i) >

ii) <

iii) >

d) Choose the correct inequality.

Answer:

a	$-21 > -9$	$-21 < -9$
b	$14 > 11$	$14 > 11$
c	$-5 > 5$	$-5 < 5$
d	$23 > 32$	$23 < 32$