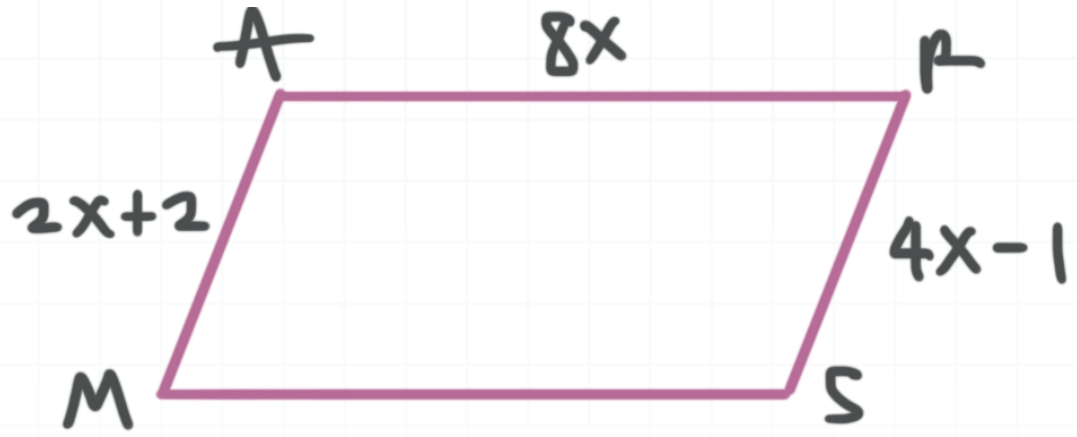
**Topic**: Measures of parallelograms

**Question**: In parallelogram $MARS$, find the length of $\overline{MS}$.




**Answer choices**:

A 1.5

B 5

C 8.5

D 12

**Solution**: D

Opposite sides of a parallelogram are congruent, so

$$4x - 1 = 2x + 2$$

$$2x = 3$$

$$x = 1.5$$

Therefore,

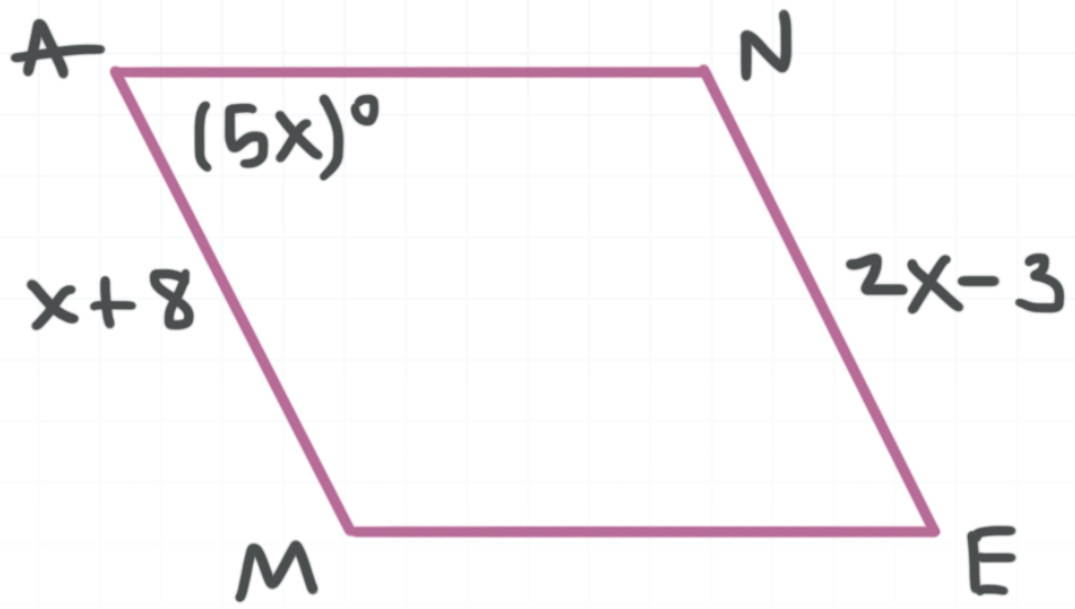
$$\overline{MS} = \overline{AR} = 8x$$

$$\overline{MS} = \overline{AR} = 8(1.5)$$

$$\overline{MS} = \overline{AR} = 12$$

**Topic**: Measures of parallelograms

**Question**: In parallelogram $MANE$, find $m\angle NEM$.




**Answer choices:**

A $55°$

B $65°$

C $85°$

D $125°$

**Solution**: A

Opposite sides of a parallelogram are congruent, so

$$2x - 3 = x + 8$$

$$x = 11$$

Therefore,

$$m\angle MAN = (5x)^\circ$$

$$m\angle MAN = (5 \cdot 11)^\circ$$

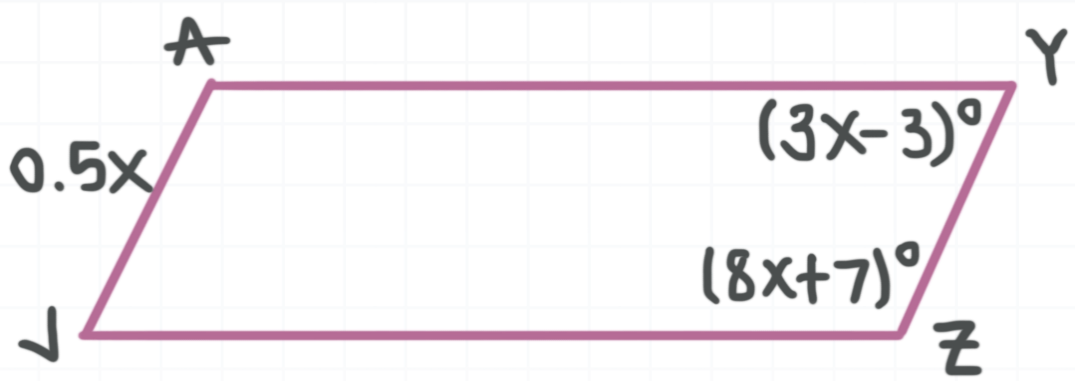
$$m\angle MAN = 55^\circ$$

Opposite angles of a parallelogram are congruent, so

$$m\angle NEM = m\angle MAN = 55^\circ$$

**Topic**: Measures of parallelograms

**Question**: In parallelogram $JAYZ$, find the length of $\overline{AJ}$.




**Answer choices**:

A 5

B 6

C 8

D 10

**Solution**: C

Consecutive angles of a parallelogram are supplementary (angles next to each other add up to $180°$), so

$$(3x - 3)° + (8x + 7)° = 180$$

$$11x° + 4° = 180°$$

$$11x° = 176°$$

$$x° = 16°$$

Therefore,

$$\overline{AJ} = 0.5x$$

$$\overline{AJ} = 0.5(16)$$

$$\overline{AJ} = 8$$