

Maths

Fractions

Pirate Treasure



Aim

- I can compare and order fractions using common denominators or common numerators.

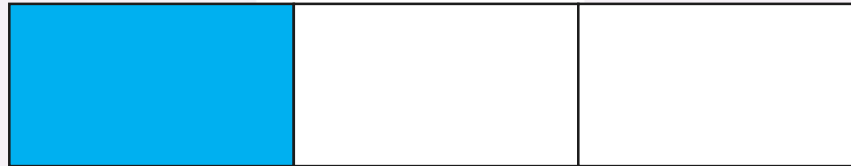
Success Criteria

- I can use bar models to compare and order fractions.
- I can use the $<$ and $>$ symbols to compare fractions.
- I can use a common numerator to compare and order fractions.
- I can use a common denominator to compare and order fractions.
- I can choose the best method to use to compare and order fractions.

Bar Model Fractions



Use the fractions bar models to complete the sentences.



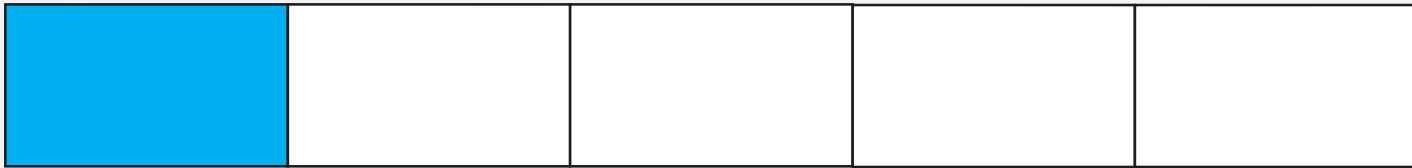
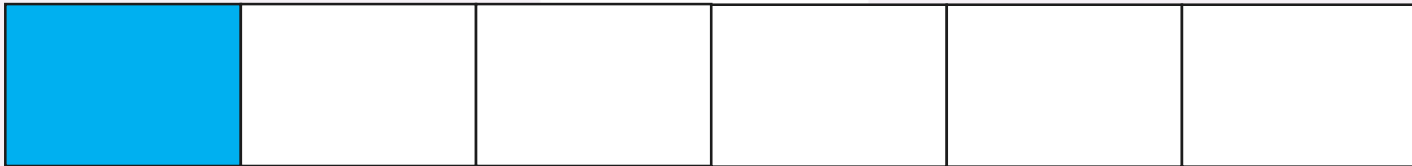
One third is bigger than one quarter.



Bar Model Fractions



Use the fractions bar models to complete the sentences.



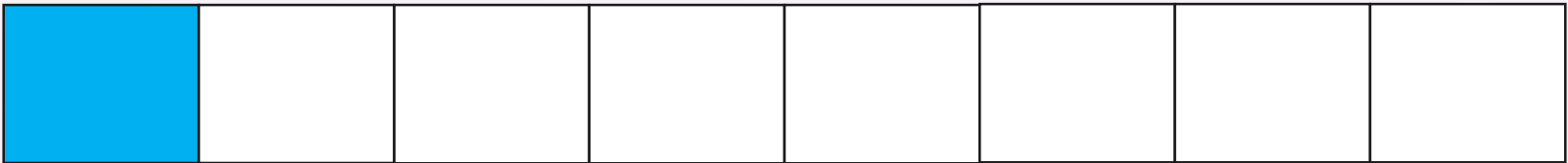
One sixth is smaller than one fifth.



Bar Model Fractions



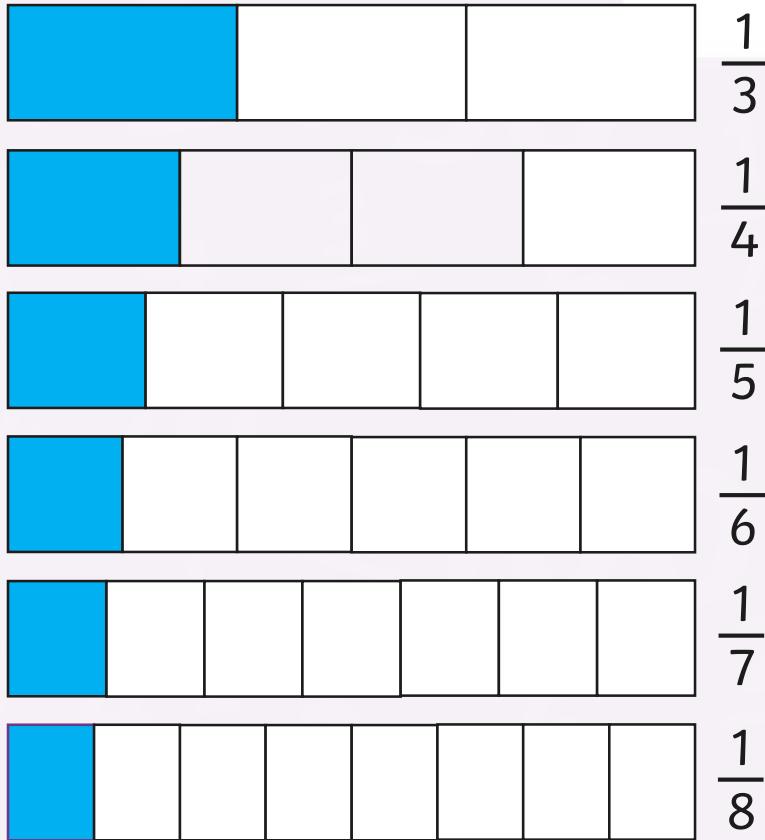
Use the fractions bar models to complete the sentences.



One seventh is bigger than one eighth.

One ninth is smaller than one eighth.

Bar Model Fractions



What rule can we use when comparing fractions with the same numerator?

The larger the denominator, the smaller the fraction.



Comparing Using the Numerator

How can I compare these

What do you notice about the original numerators and the new numerators? Can you explain what has happened?

$\frac{6}{11}$ $\frac{3}{5}$ $\times 2$ $\times 2$

$\frac{6}{11} < \frac{6}{10}$

Comparing Using the Numerator

$\frac{5}{7}$ $\times 3$ $\times 3$ $\frac{15}{19}$

$\frac{15}{21} < \frac{15}{19}$

How can I compare these

What do you notice about the original numerators and the new numerators? Can you explain what has happened?



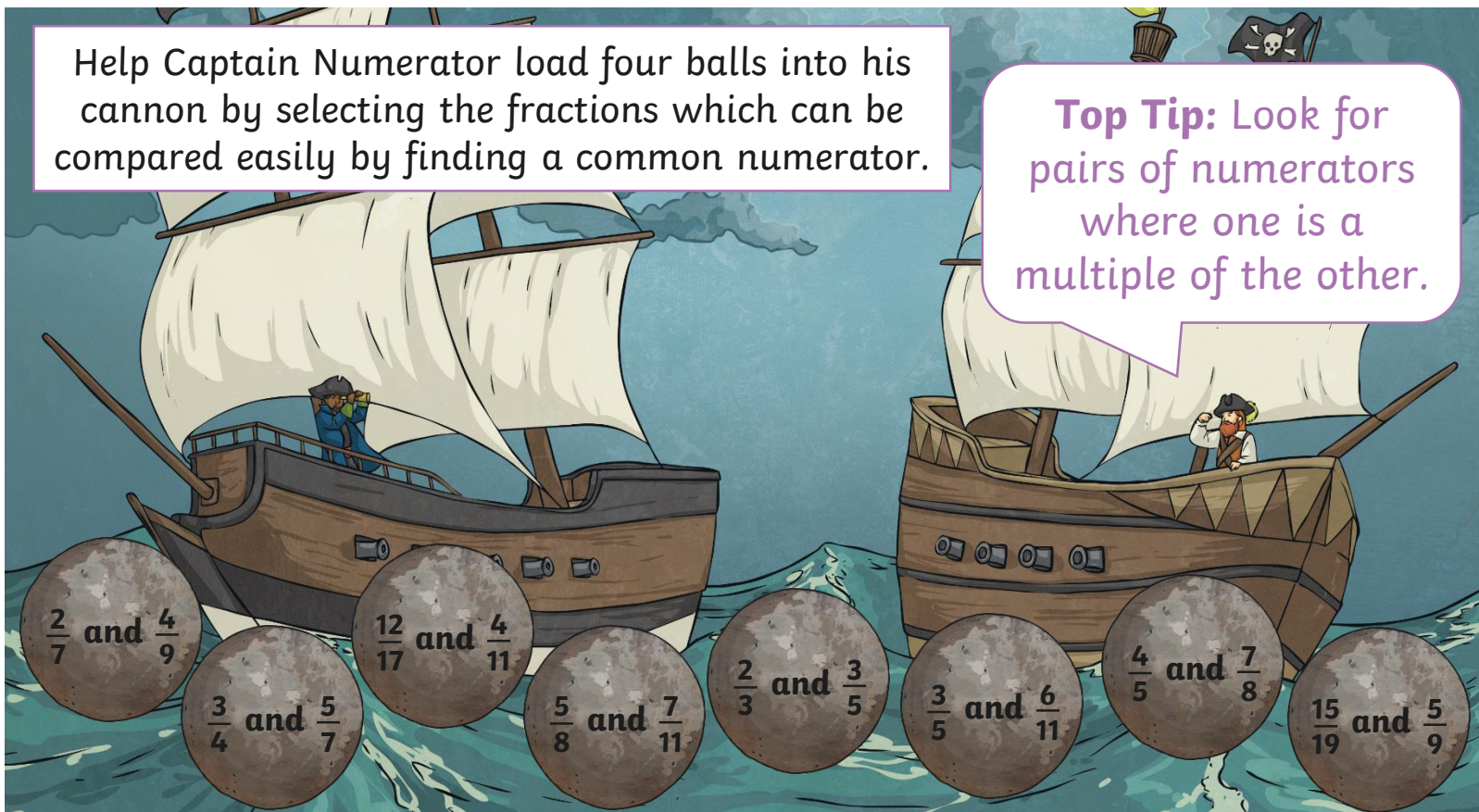
Pirate Ship Battle



Captain Numerator needs to defend his ship from his arch-nemesis Captain Denominator.

Help Captain Numerator load four balls into his cannon by selecting the fractions which can be compared easily by finding a common numerator.

Top Tip: Look for pairs of numerators where one is a multiple of the other.

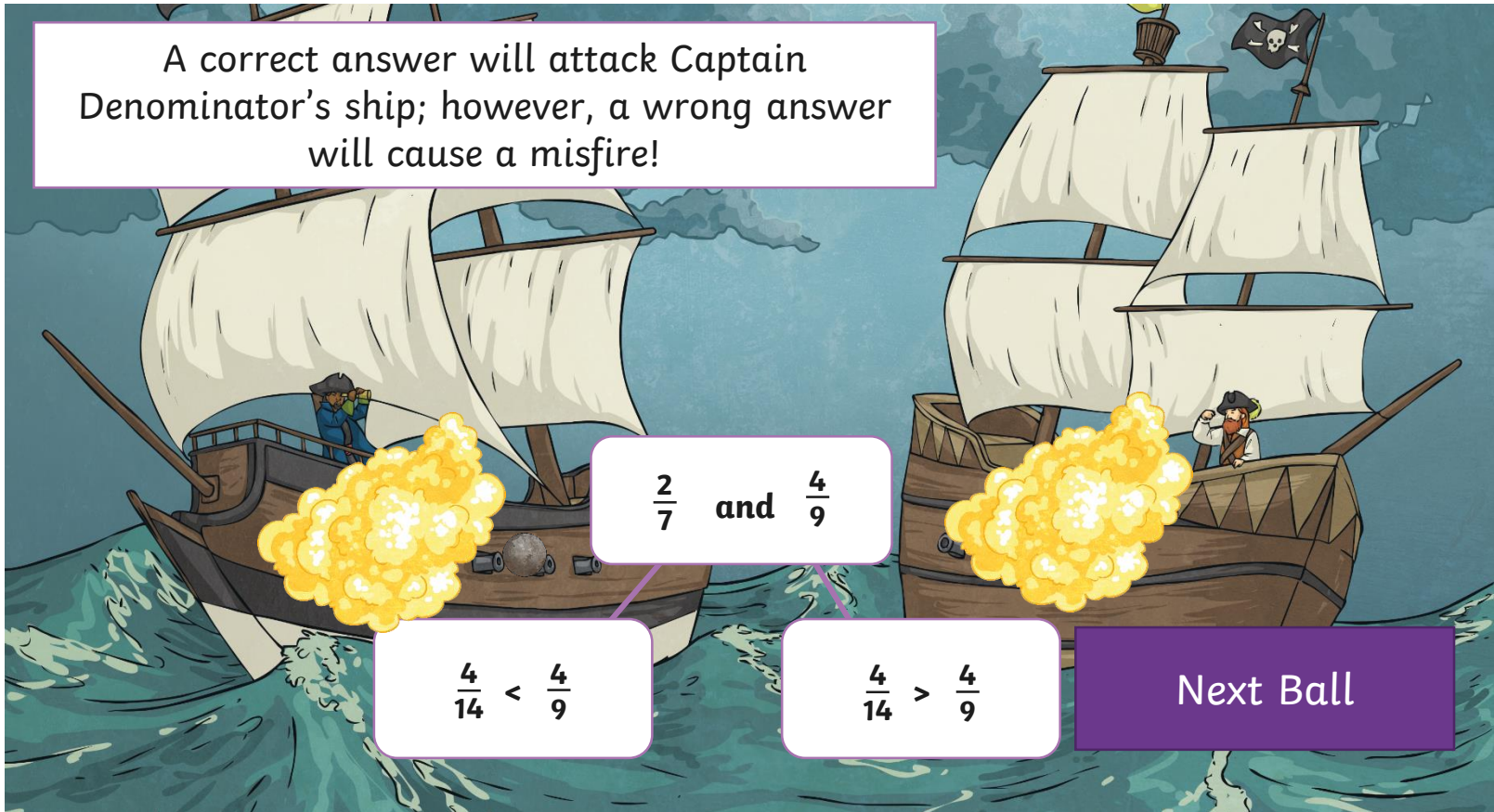


Pirate Ship Battle



Now that Captain Numerator has his cannon loaded for battle, help him launch them by correctly comparing the fractions.

A correct answer will attack Captain Denominator's ship; however, a wrong answer will cause a misfire!



$$\frac{2}{7} \text{ and } \frac{4}{9}$$

$$\frac{4}{14} < \frac{4}{9}$$

$$\frac{4}{14} > \frac{4}{9}$$

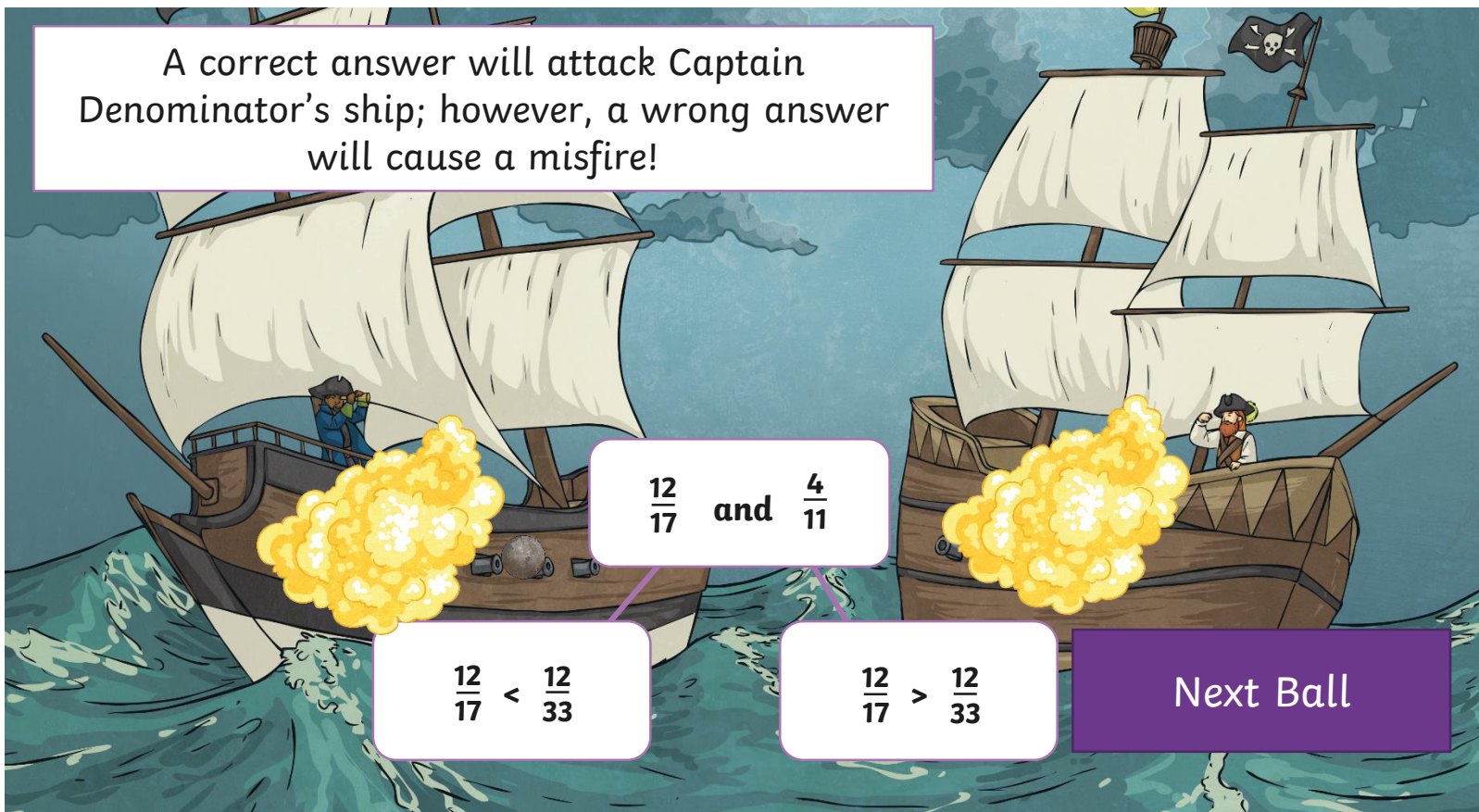
Next Ball

Pirate Ship Battle



Now that Captain Numerator has his cannon loaded for battle, help him launch them by correctly comparing the fractions.

A correct answer will attack Captain Denominator's ship; however, a wrong answer will cause a misfire!



$$\frac{12}{17} \text{ and } \frac{4}{11}$$

$$\frac{12}{17} < \frac{12}{33}$$

$$\frac{12}{17} > \frac{12}{33}$$

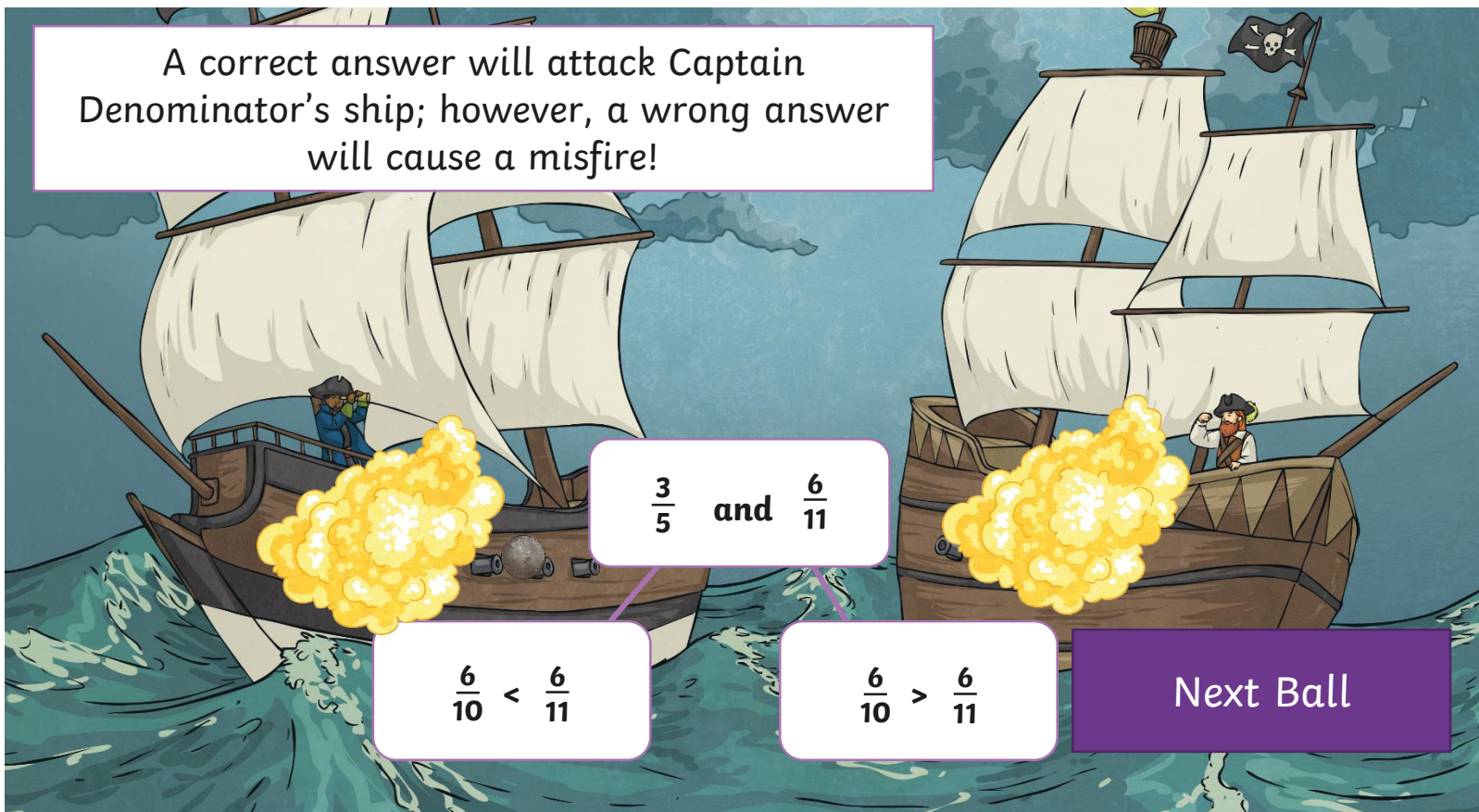
Next Ball

Pirate Ship Battle



Now that Captain Numerator has his cannon loaded for battle, help him launch them by correctly comparing the fractions.

A correct answer will attack Captain Denominator's ship; however, a wrong answer will cause a misfire!



$$\frac{3}{5} \text{ and } \frac{6}{11}$$

$$\frac{6}{10} < \frac{6}{11}$$

$$\frac{6}{10} > \frac{6}{11}$$

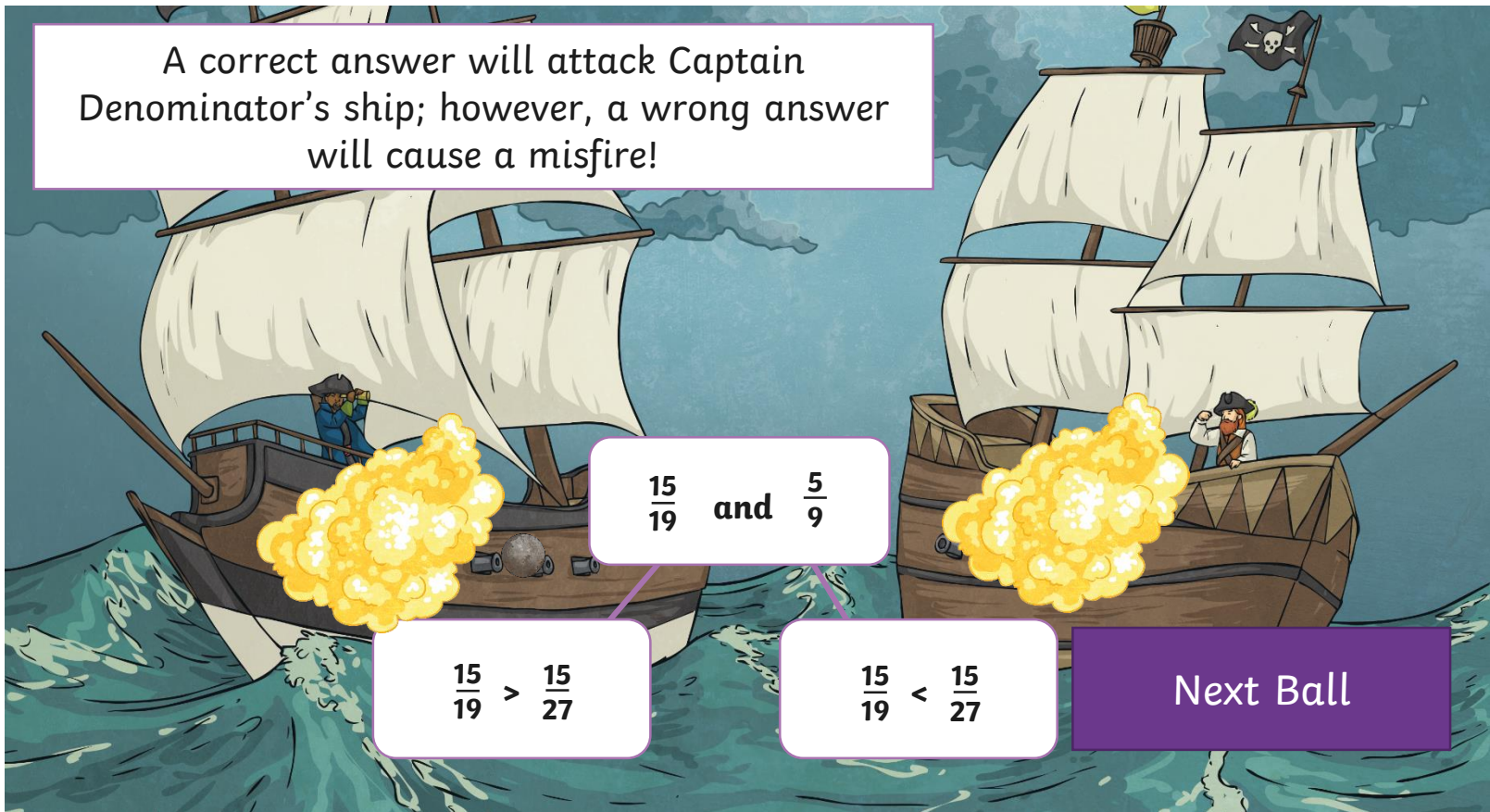
Next Ball

Pirate Ship Battle



Now that Captain Numerator has his cannon loaded for battle, help him launch them by correctly comparing the fractions.

A correct answer will attack Captain Denominator's ship; however, a wrong answer will cause a misfire!



$$\frac{15}{19} \text{ and } \frac{5}{9}$$

$$\frac{15}{19} > \frac{15}{27}$$

$$\frac{15}{19} < \frac{15}{27}$$

Next Ball

Ordering Using the Numerator

Three pirates are comparing how many gold coins they have in their hauls of treasure. Put the fractions that the pirates have in order from smallest to greatest, using common numerators.

$$\frac{6}{11} = \frac{18}{33}$$

My gold coins are $\frac{6}{11}$ of my treasure haul.



<

My gold coins are $\frac{18}{23}$ of my treasure haul.



<

$$\frac{3}{7} = \frac{18}{42}$$

My gold coins are $\frac{3}{7}$ of my treasure haul.

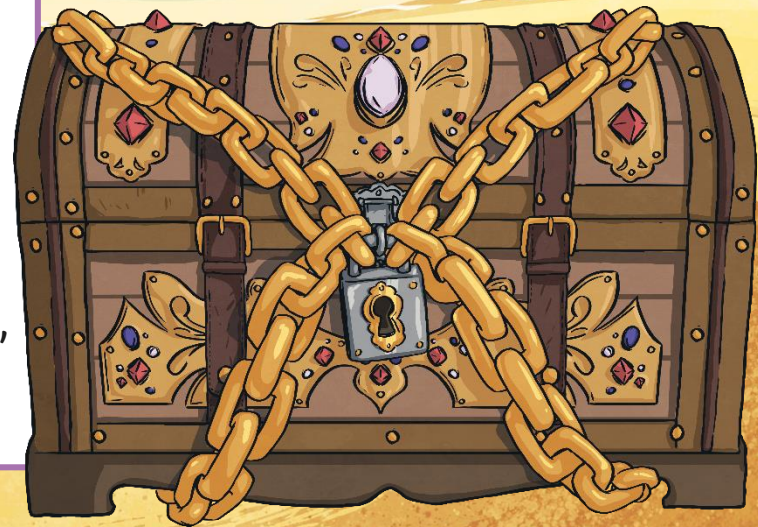




Unlock the Pirate Treasure Chest

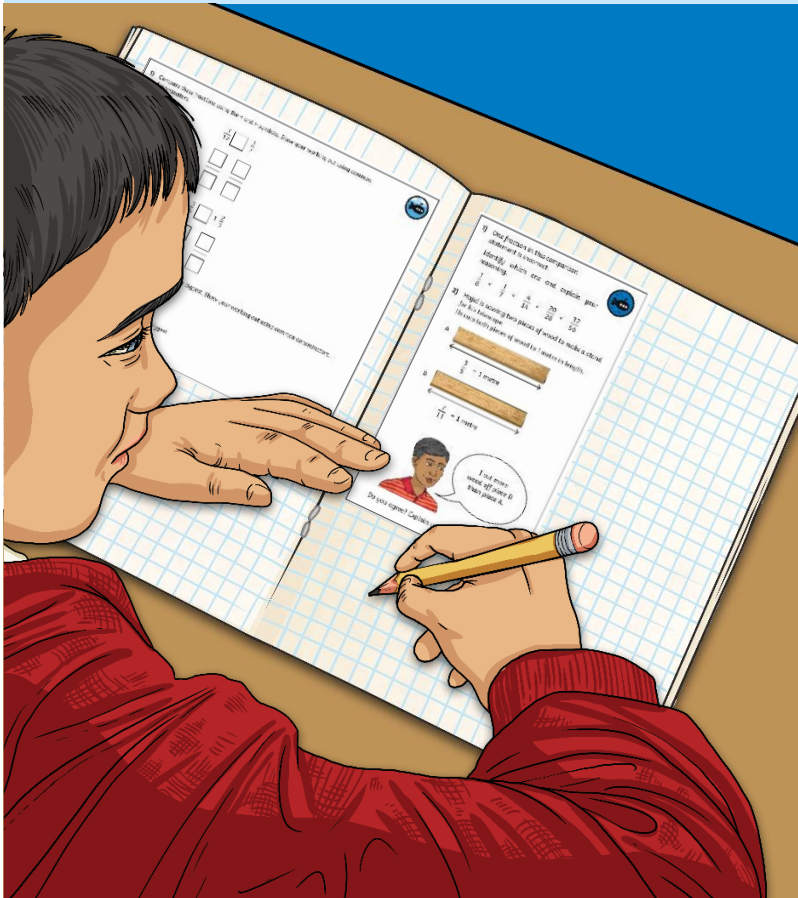
You have unearthed this locked treasure chest full of pirate booty.
Solve the clues to discover the code to open the padlock.

- You can work in small groups.
- Work together to solve the puzzles.
- Write your answers down on the recording sheet.
- Once you have discovered the code to unlock the treasure chest, check it with your teacher.



Diving into Mastery

Dive in by completing your own activity!



- 1) One fraction in this comparison is incorrect. Identify which one and explain why.

$$\frac{1}{8} < \frac{1}{7} < \frac{4}{14} < \dots$$

- 2) Majid is sawing two pieces of wood. He cuts both pieces of wood to 1 metre.



$$\frac{3}{5} = 1 \text{ metre}$$



Do you agree? Explain your reasoning.

- 1) Compare these fractions using the < and > symbols. Show your working out using common denominators.

$$\frac{5}{8} \square \frac{4}{7}$$

$$\frac{7}{12} \square \frac{3}{7}$$

$$1\frac{3}{4} \square 1\frac{8}{9}$$

$$1\frac{3}{5} \square 1\frac{2}{3}$$

- 2) Put these fractions in order from smallest to biggest. Show your working out using common denominators.

$$\frac{13}{15}, \frac{5}{6}, \frac{9}{10}$$

smallest

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--

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biggest.



Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{11}{12}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{3}{5}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{3}{8}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{1}{7}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{1}{8}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

Pirate Action Game



Which of the following statements does this fraction fit?
Perform the action that matches the fraction.



$$\frac{5}{6}$$



less than $\frac{1}{4}$	Scrub the Decks	Crouch down and pretend to clean the floor with your hands.
greater than $\frac{1}{4}$ but less than $\frac{1}{2}$	Climb the Rigging	Pretend to climb a rope ladder.
greater than $\frac{1}{2}$ but less than $\frac{3}{4}$	Captain's Coming	Salute and shout 'Aye Aye Captain!'.
greater than $\frac{3}{4}$	Crow's Nest	Peer into the distance and shout 'Land ahoy!'.

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