



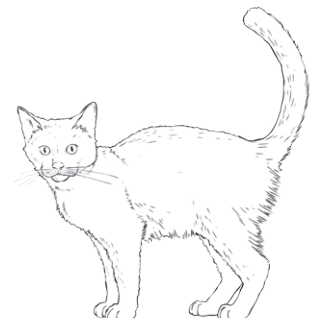
Dasher

I can solve speed, distance and time problems.



When Dasher the dog sees a cat across the park, he is off running at incredible speeds in pursuit of the feline fluffball. Can you work out the answers to these questions using scaling?

- 1) How long does it take him to run these distances?
 - a) If he runs 30 metres across the park in 9 seconds, how long does it take him to run 60 metres?
Use scaling: if it takes him 9 seconds to run 30 metres and he runs 60 metres (twice as far), it will take him twice as long. It will take him _____ seconds.
 - b) If he runs 55 metres across the park in 11 seconds, how long does it take him to run 110 metres? _____ seconds
 - c) If he runs 50 metres across the park in 24 seconds, how long does it take him to run 25 metres? _____ seconds
 - d) If he runs 100 metres across the park in 40 seconds, how long does it take him to run 25 metres? _____ seconds
 - e) If he runs 250 metres across the park in 50 seconds, how long does it take him to run 25 metres? _____ seconds
- 2) How far has he run?
 - a) If Dasher sees a cat and chases it for 20 seconds at a speed of 5 metres per second, how far has he run?
He runs 5 metres every second for 20 seconds. $20 \times 5 =$ _____.
He must have run _____ metres.
 - b) How far has Dasher run if he chases a cat for 32 seconds at a speed of 3 metres per second? _____ seconds
 - c) How far has Dasher run if he runs at a speed of 2 metres per second for a whole minute? _____ seconds





3) What is Dasher's speed?

a) What speed is Dasher running at if he runs 81 metres in 9 seconds?

81 ÷ 9 = _____. He's running at _____ metres per second.

b) What speed is Dasher running at if he runs 48 metres in 12 seconds?

He's running at _____ metres per second.

c) What speed is Dasher running at if he runs 24 metres in 4 seconds?

He's running at _____ metres per second.





Dasher Answers

Question	Answer
1.	How long does it take him to run these distances?
a	If he runs 30 metres across the park in 9 seconds, how long does it take him to run 60 metres? Use scaling: if it takes him 9 seconds to run 30 metres and he runs 60 metres (twice as far), it will take him twice as long. It will take him 18 seconds.
b	If he runs 55 metres across the park in 11 seconds, how long does it take him to run 110 metres? 22 seconds.
c	If he runs 50 metres across the park in 24 seconds, how long does it take him to run 25 metres? 12 seconds.
d	If he runs 100 metres across the park in 40 seconds, how long does it take him to run 25 metres? 10 seconds.
e	If he runs 250 metres across the park in 50 seconds, how long does it take him to run 25 metres? 5 seconds.
2.	How far has he run?
a	If Dasher sees a cat and chases it for 20 seconds at a speed of 5 metres per second, how far has he run? He runs 5 metres every second for 20 seconds. $20 \times 5 = 100$. He must have run 100 metres.
b	How far has Dasher run if he chases a cat for 32 seconds at a speed of 3 metres per second? 96 metres.
c	How far has Dasher run if he runs at a speed of 2 metres per second for a whole minute? 120 metres.
3.	What is Dasher's speed?
a	What speed is Dasher running at if he runs 81 metres in 9 seconds? $81 \div 9 = 9$. He's running at 9 metres per second.
b	What speed is Dasher running at if he runs 48 metres in 12 seconds? He's running at 4 metres per second.
c	What speed is Dasher running at if he runs 24 metres in 4 seconds? He's running at 6 metres per second.



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When Dasher the dog sees a cat across the park, he is off running at incredible speeds in pursuit of the feline fluffball. Can you work out the answers to these questions?

Remember: speed (in metres per second) = distance (in metres) \div time (in seconds)

1) How fast is Dasher dashing?

a) He chases a cat for 75m across the park and it takes him 15 seconds.

He's dashing at _____ metres per second.

b) It takes him 1 minute to get to the park which is 120m away.

He's dashing at _____ metres per second.

c) He runs to the other side of the 36m park and back and it takes him 12 seconds.

He's dashing at _____ metres per second.

2) How far does Dasher get?

a) He runs for 33 seconds at a speed of 4 metres per second.

_____ metres

b) It takes him 2 minutes to run around the park at a speed of 5 metres per second.

_____ metres

c) He chases a cat for 64 seconds at a speed of 3 metres per second.

_____ metres



3) How long does it take Dasher?

a) He runs 64 metres at a speed of 8 metres per second.

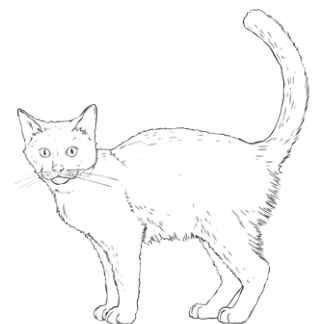
_____ seconds

b) He crosses the 144-metre park at a speed of 12 metres per second.

_____ seconds

c) He chases the cat around the 54-metre trail twice at a speed of 9 metres per second.

_____ seconds





4) Write some of your own Dasher problems for a partner to solve.

- a) _____

- b) _____

- c) _____





Dasher Answers

Question	Answer
1.	How fast is Dasher dashing?
a	He chases a cat for 75m across the park and it takes him 15 seconds. He is dashing at 5 metres per second.
b	It takes him 1 minute to get to the park which is 120m away. He is dashing at 2 metres per second.
c	He runs to the other side of the 36m park and back and it takes him 12 seconds. He is dashing at 3 metres per second.
2.	How far does Dasher get?
a	He runs for 33 seconds at a speed of 4 metres per second. 132 metres
b	It takes him 2 minutes to run around the park at a speed of 5 metres per second. 600 metres
c	He chases a cat for 64 seconds at a speed of 3 metres per second. 192 metres
3.	How long does it take Dasher?
a	He runs 64 metres at a speed of 8 metres per second. 8 seconds
b	He crosses the 144-metre park at a speed of 12 metres per second. 12 seconds
c	He chases the cat around the 54-metre trail twice at a speed of 9 metres per second. 6 seconds
4.	Write some of your own Dasher problems for a partner to solve.
	Multiple answers possible.



Dasher

I can solve speed, distance and time problems.



When Dasher the dog sees a cat across the park, he is off running at incredible speeds in pursuit of the feline fluffball. Can you work out the answers to these questions?

Remember: speed (in metres per second) = distance (in metres) \div time (in seconds)

1) How fast is Dasher dashing?

a) He chases a cat for 135m across the park and it takes him 27 seconds.

He's dashing at _____ metres per second.

b) It takes him 3 and a half minutes to get to the park which is 840m away.

He's dashing at _____ metres per second.

c) He runs to the other side of the 360m park and back and it takes him 80 seconds.

He's dashing at _____ metres per second.

2) How far does Dasher get?

a) He runs for 336 seconds at a speed of 4 metres per second.

_____ metres

b) It takes him 2 and a half minutes to run around the park at a speed of 5 metres per second.

_____ metres

c) He chases a cat for 643 seconds at a speed of 3 metres per second.

_____ metres



3) How long does it take Dasher?

a) He runs 640 metres at a speed of 8 metres per second.

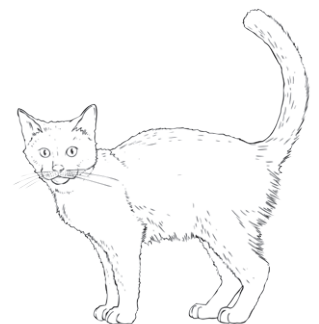
_____ seconds

b) He crosses the 144-metre park at a speed of 6 metres per second.

_____ seconds

c) He chases the cat around the 292.5-metre trail twice at a speed of 9 metres per second.

_____ seconds





4) Write some of your own Dasher problems for a partner to solve.

- a) _____

- b) _____

- c) _____





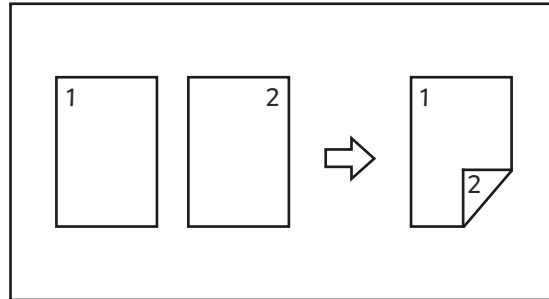
Dasher Answers

Question	Answer
1.	How fast is Dasher dashing?
a	He chases a cat for 135m across the park and it takes him 27 seconds. He is dashing at 5 metres per second.
b	It takes him 3 and a half minutes to get to the park which is 840m away. He is dashing at 4 metres per second.
c	He runs to the other side of the 360m park and back and it takes him 80 seconds. He is dashing at 9 metres per second.
2.	How far does Dasher get?
a	He runs for 336 seconds at a speed of 4 metres per second. 1344 metres
b	It takes him 2 and a half minutes to run around the park at a speed of 5 metres per second. 750 metres
c	He chases a cat for 643 seconds at a speed of 3 metres per second. 1929 metres
3.	How long does it take Dasher?
a	He runs 640 metres at a speed of 8 metres per second. 80 seconds
b	He crosses the 144-metre park at a speed of 6 metres per second. 24 seconds
c	He chases the cat around the 292.5-metre trail twice at a speed of 9 metres per second. 65 seconds
4.	Write some of your own Dasher problems for a partner to solve.
	Multiple answers possible.

Masterful Multiplication Game

Instructions

To create these game boards, you must utilise the duplex function on your school photocopier to print double-sided pages.



The solid grey lines are cut lines.

The dashed grey lines are valley fold lines.

The dotted grey lines are mountain fold lines.

Play in groups of 3 or 4.

1. Roll a dice.
2. Open any flap with that number on it.
3. Multiply the number on the flap by the number under the flap. Use paper or a whiteboard to write down a calculation and work it out if you need to.
4. The winner of each round is the person with the answer closest to 100.

5

2

5

4

6

1

6

2

1

4

3

6

5

1

2

3

12 21 11 37 8 23 9 26

5 40 14 30 25 29 36 7