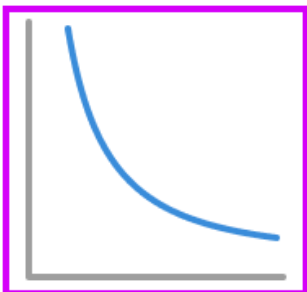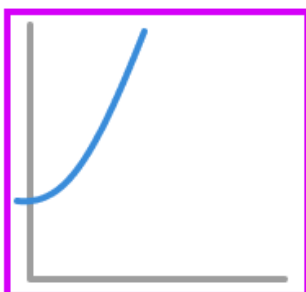# Directly proportional graphs / Inversely proportional - Worksheet

Skill

Group A - Direct proportion

Identify the graphs representing direct proportion:
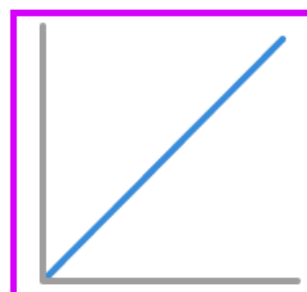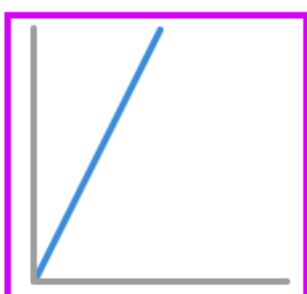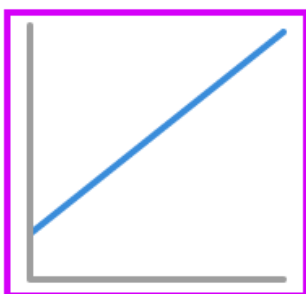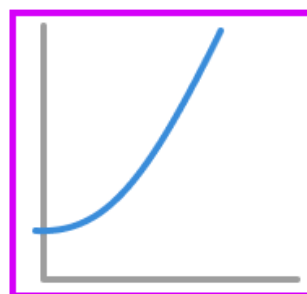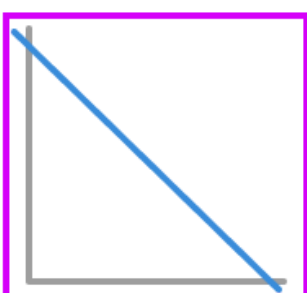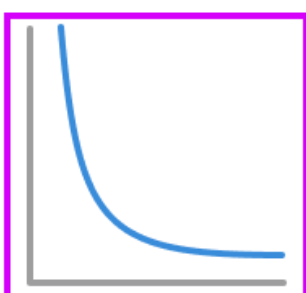
1)

2)

3)

4)

5)

6)

Group B - Inverse proportion

Identify the graphs representing inverse proportion:

1)

2)

3)
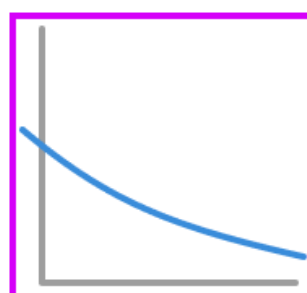
4)
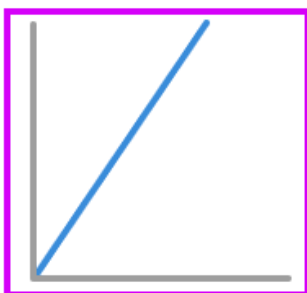
5)

6)

Directly proportional graphs / Inversely proportional - Worksheet

Group C - Mixed

Identify the graphs representing direct proportion, inverse proportion or neither:
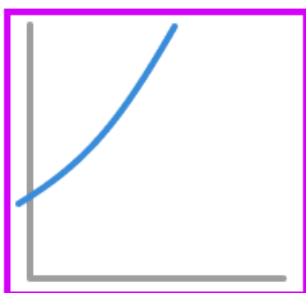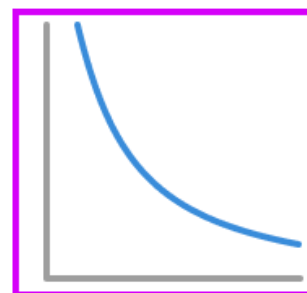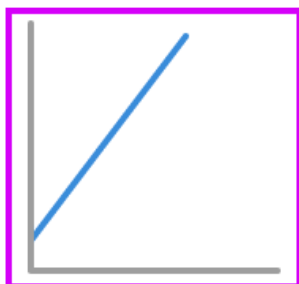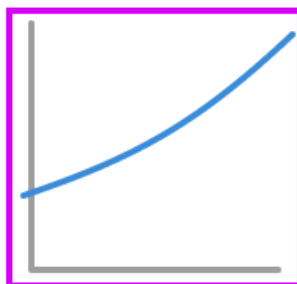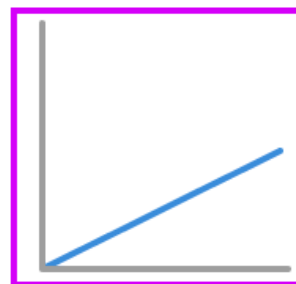
1)

2)

3)

4)

5)

6)

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2
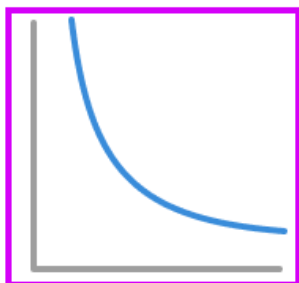
Directly proportional graphs / Inversely proportional - Worksheet

Applied

1) y is directly proportional to x. Here is a graph of the relationship.

(a)   What is the value of y when $x = 3$?

(b)   What is the value of x when $y = 14$?

2) y is directly proportional to x^2. Here is a graph of the relationship.

(a)   What is the value of y when $x = 13$.
Give your answer to the nearest integer.

(b)   What is the value of x when $y = 5$.
Give your answer to the nearest integer.

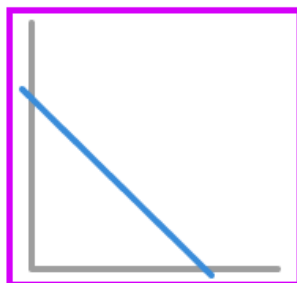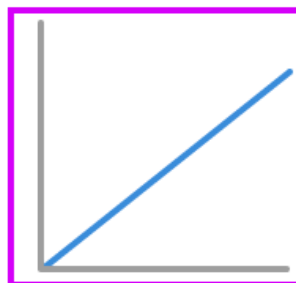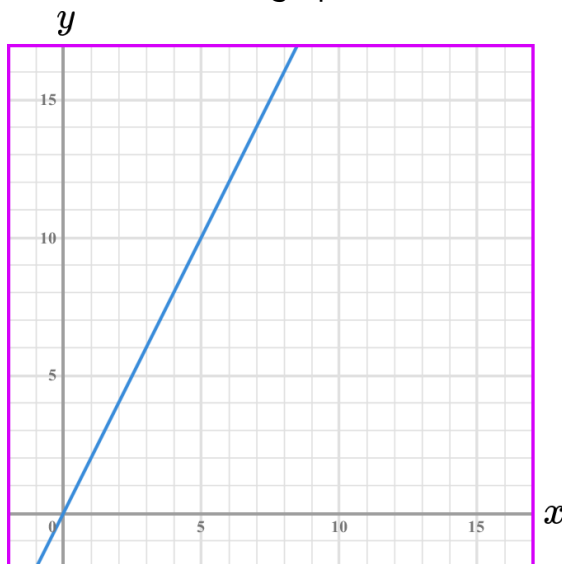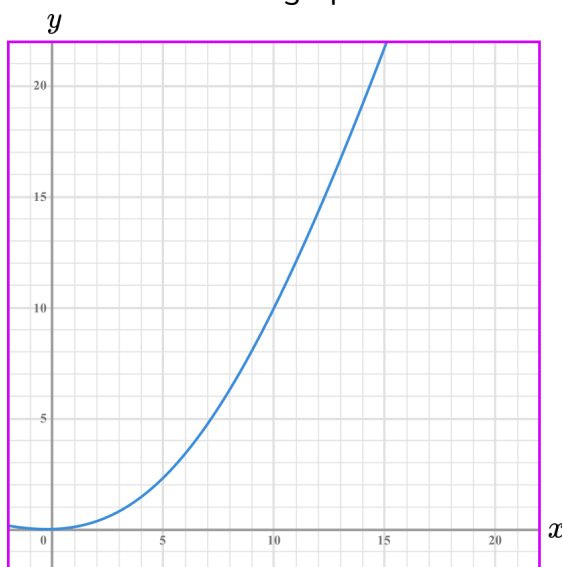**Directly proportional graphs / Inversely proportional - Worksheet**

3) y is inversely proportional to x. Here is a graph of the relationship.

(a) What is the value of y when $x = 4$?
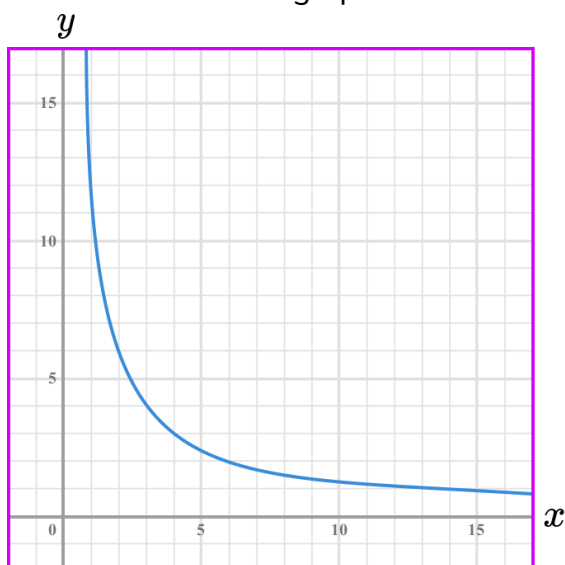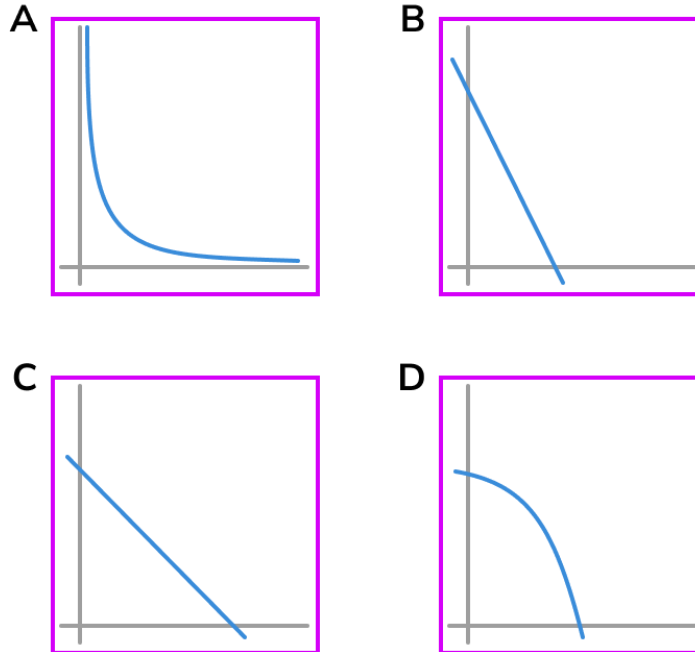
(b) What is the value of x when $y = 12$?

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Directly proportional graphs / Inversely proportional - Exam Questions
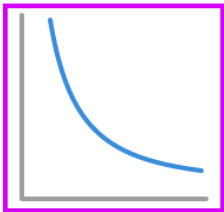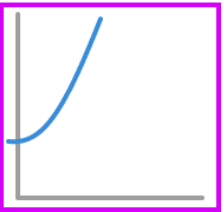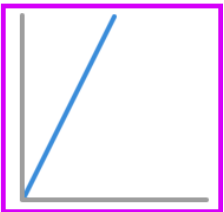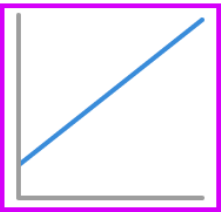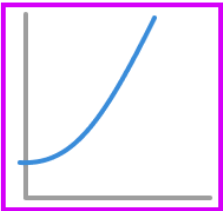
1)   Here are 4 graphs.

A

B

C

D

Write down which graph shows inverse proportionality.

....

(1 mark)

---

2) p is directly proportional to t
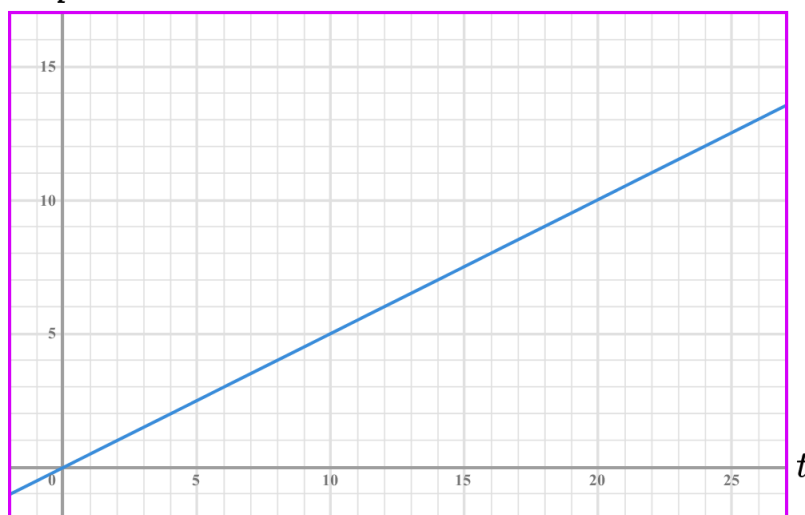
Use the graph to find the value of p when $t = 18$

....

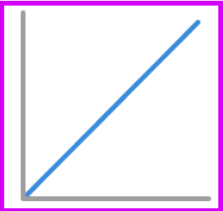**(2 marks)**

3) **(a)** Here are 4 graphs.

A

B

C

D

Match each statement below with one of the four graphs.

Proportionality relationship	Graph
y is directly proportional to x	
y is inversely proportional to x	
y is directly proportional to x^2	
y is inversely proportional to x^2	

(2)

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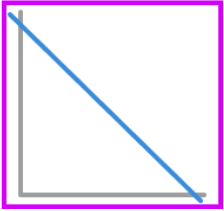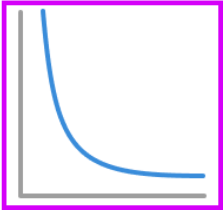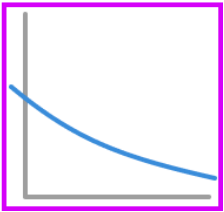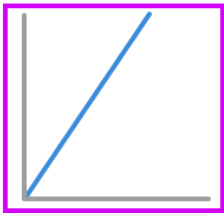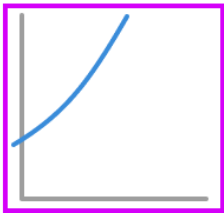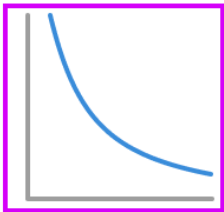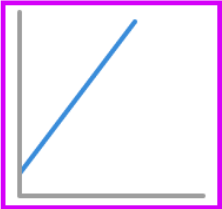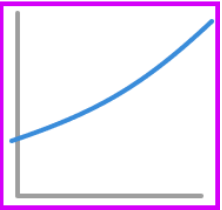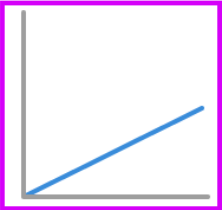
Directly proportional graphs / Inversely proportional - Answers

	Question	Answer
	Skill Questions	
Group A	Identify the graphs representing direct proportion: **1)**	**1)** No
	2)	**2)** No
	3)	**3)** Yes
	4)	**4)** Yes
	5)	**5)** No
	6)	**6)** No

THIRD SPACE
LEARNING

Directly proportional graphs / Inversely proportional - Answers

Group B	Identify the graphs representing inverse proportion:	
	1)	**1)** No
	2)	**2)** Yes
	3)	**3)** No
	4)	**4)** No
	5)	**5)** No
	6)	**6)** Yes

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THIRD SPACE
LEARNING

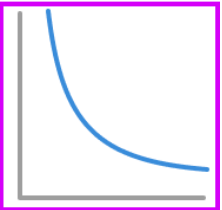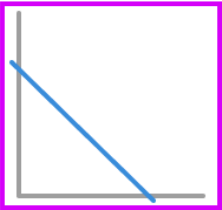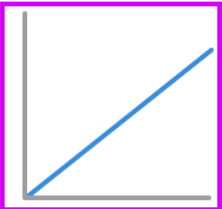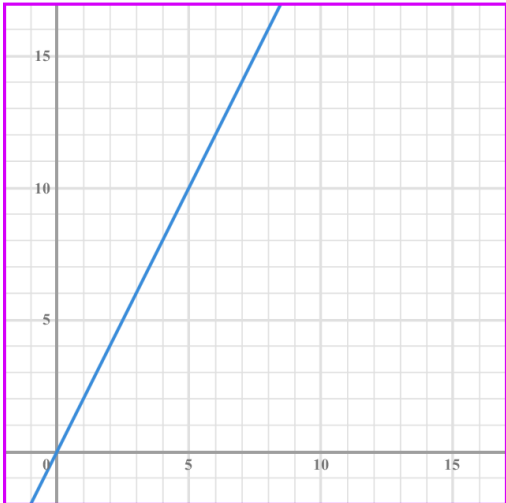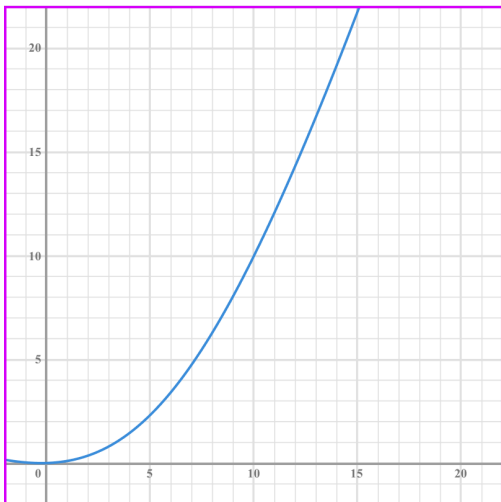# Directly proportional graphs / Inversely proportional - Answers

Group C	Identify the graphs representing direct proportion, inverse proportion or neither:	
	1)	**1)** Neither
	2)	**2)** Neither
	3)	**3)** Direct
	4)	**4)** Inverse
	5)	**5)** Neither
	6)	**6)** Direct

Directly proportional graphs / Inversely proportional - Answers
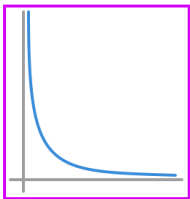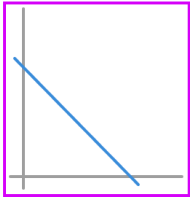
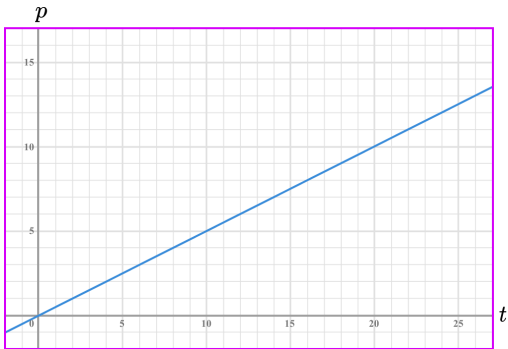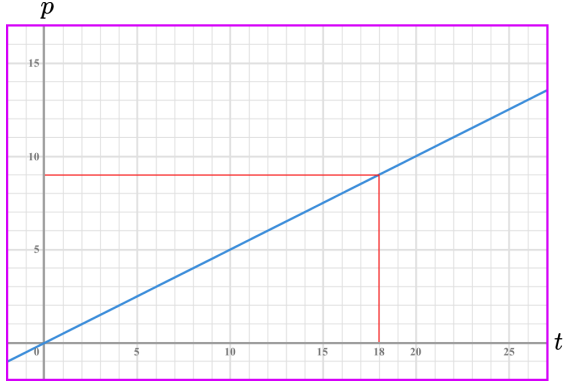|	**Question**	**Answer**
	Applied Questions	
1)	y is directly proportional to x. Here is a graph of the relationship. **a)** What is the value of y when $x = 3$? **b)** What is the value of x when $y = 14$?	**a)** $y = 6$ **b)** $x = 7$
2)	y is directly proportional to x^2. Here is a graph of the relationship. **a)** What is the value of y when $x = 13$. Give your answer to the nearest integer. **b)** What is the value of x when $y = 5$. Give your answer to the nearest integer.	**a)** $y = 17$ (to the nearest integer) **b)** $x = 7$ (to the nearest integer)

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Directly proportional graphs / Inversely proportional - Answers

3) y is inversely proportional to x.

Here is a graph representing the relationship.
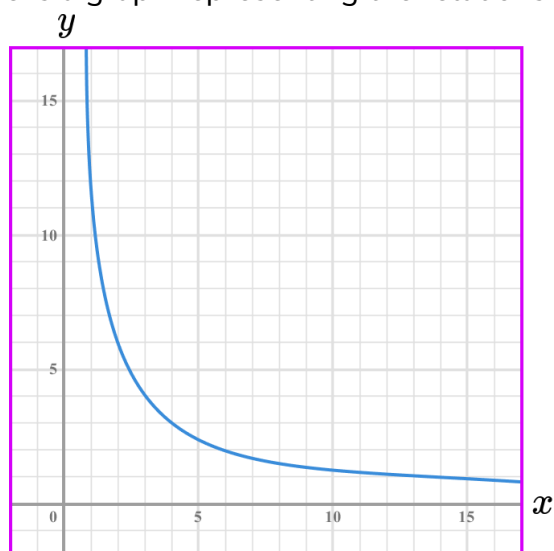
a) What is the value of y when $x = 4$?

b) What is the value of x when $y = 12$?

a) $y = 3$

b) $x = 1$

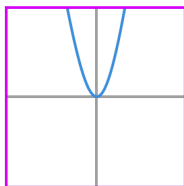## Directly proportional graphs / Inversely proportional - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	Here are 4 graphs. A B C D Write down which graph shows inverse proportionality.	**(a)** A	**(1)**
2)	p is directly proportional to t Use the graph to find the value of p when $t = 18$	 For using the graph $p = 9$	**(1)** **(1)**

Directly proportional graphs / Inversely proportional - Mark Scheme

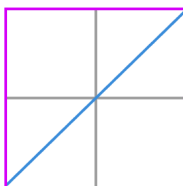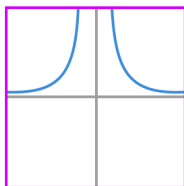**3)** Here are 4 graphs.

A

B

C

D

Match each statement below with one of the four graphs.

Proportionality relationship	Graph
y is directly proportional to x	
y is inversely proportional to x	
y is directly proportional to x^2	
y is inversely proportional to x^2	

Proportionality relationship	Graph
y is directly proportional to x	B
y is inversely proportional to x	D
y is directly proportional to x^2	A
y is inversely proportional to x^2	C

At least 2 correct **(1)**

All 4 correct **(1)**