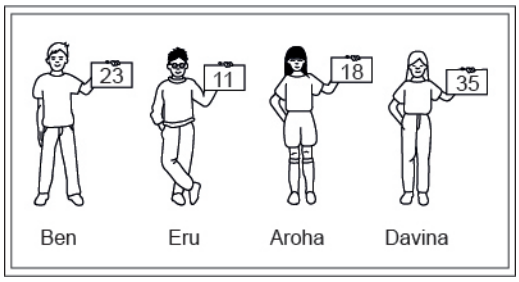
Choose a circle to show how much each sentence is like you	Very Unlike Me 1	Unlike Me 2	Like Me 3	Very Like Me 4
01. I like maths at school.	⬭	⬭	⬭	⬭
02. I am good at maths.	⬭	⬭	⬭	⬭
03. My teacher thinks I am good at maths.	⬭	⬭	⬭	⬭
04. My Mum and Dad think I am good at maths.	⬭	⬭	⬭	⬭
05. I enjoy doing maths in my own time (not at school).	⬭	⬭	⬭	⬭
06. I enjoy doing things in maths that I haven't tried before.	⬭	⬭	⬭	⬭

Practice Questions

These practice questions are to help you understand how to show your answer for different types of questions.

P01. Who is holding a card with an even number on it?

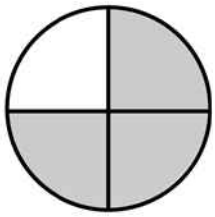


- ⬭ Ben
- ⬭ Eru
- ⬭ Aroha
- ⬭ Davina

P02. Complete this number pattern.

2, 4, ____, ____, 10

P03. What fraction of this circle is shaded?



☐

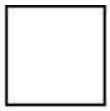
———

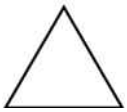
☐

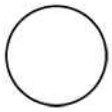
P04. Match the sentence with the correct shape.

☐ 1. I have three sides

☐ 2. I have 4 sides

a. 

b. 

c. 

P05. Which numbers make this number sentence **TRUE**?

☐ 1

☐ 2

☐ 3

☐ 4

☐ 5

P06. Put the numbers 1, 2, 3, and 4 in the boxes to order these numbers from biggest (1) to smallest (4).

☐ 3

☐ 7

☐ 2

☐ 0

P07. Select whether the following statements are True or False.

	TRUE	FALSE
In the number 213, the value of 1 is ten.	⬭	⬭
In the number 504, the value of 5 is fifty.	⬭	⬭

01. Ryan, Jodi, Tess, and Jeremy had a checkers tournament. The chart below shows the results.

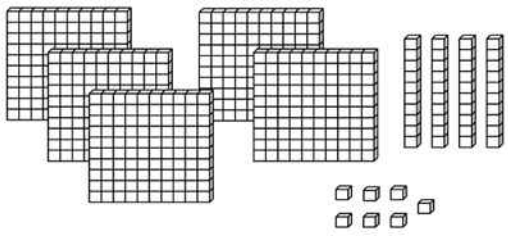
Which player won exactly $\frac{1}{2}$ of the games that he or she played?

Checkers Tournament Results

Name	Wins	Losses	Total Games
Ryan	1	5	6
Jodi	3	3	6
Tess	6	0	6
Jeremy	2	4	6

- ⬭ Ryan
- ⬭ Jodi
- ⬭ Tess
- ⬭ Jeremy

02. Look at the model of a whole number below.
Each cube in the model has a value of 1.
Which number does the model represent?



Each ◻ in the model has a value of 1.

- ⬭ 447
- ⬭ 475
- ⬭ 547
- ⬭ 557

03. In a race, the three fastest times were 12.13 seconds, 11.23 seconds and 12.31 seconds.

Which one of the following orders of first, second and third is correct?

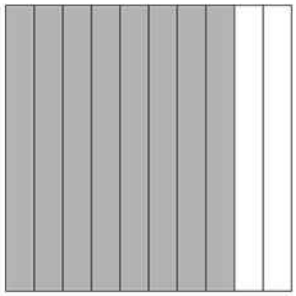
⬭ 11.23, 12.31, 12.13

⬭ 12.31, 12.13, 11.23

⬭ 12.13, 11.23, 12.31

⬭ 11.23, 12.13, 12.31

04. The figure below is shaded to represent a decimal.
Which of the following groups is shaded to represent a fraction with the same value as the decimal represented below?



⬭ 

⬭ 

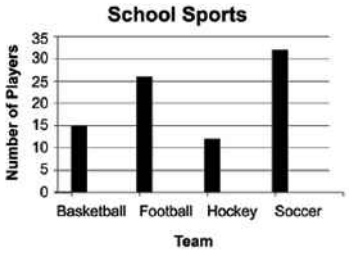
⬭ 

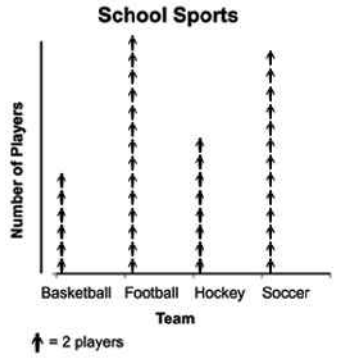
⬭ 

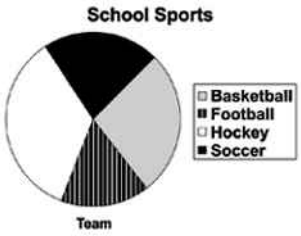
05. Barbara decided to make a graph of the number of players on her school's sports teams.
Which graph correctly shows the number of players on each team?

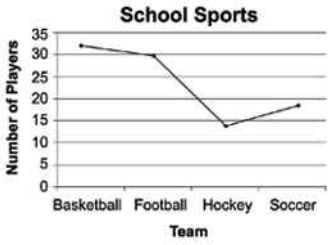
School Sports

Team	Number of Players
Basketball	12
Football	28
Hockey	16
Soccer	26









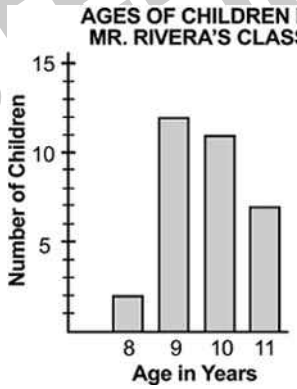
06. Which of the following statements is **TRUE**?

- ⬭ 83 521 > 85 432
- ⬭ 85 383 > 85 338
- ⬭ 53 785 > 53 875
- ⬭ 54 736 > 57 463

07. What is 4982 rounded to the nearest hundred?

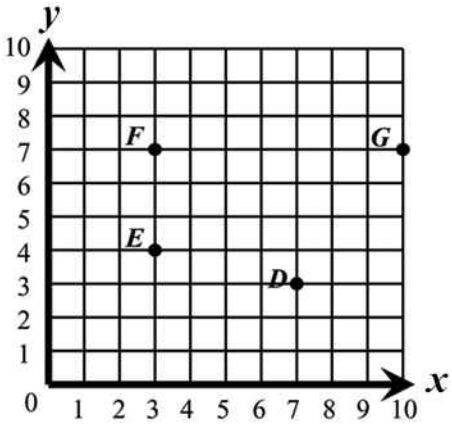
- ⬭ 4000
- ⬭ 4900
- ⬭ 4980
- ⬭ 5000

08. The graph below shows how many of the 32 children in Mr Rivera's class are 8, 9, 10, and 11 years old.
Which of the following is **TRUE**?



- ⬭ Most are younger than 9
- ⬭ Most are younger than 10
- ⬭ Most are 9 or older
- ⬭ None of the above is true

09. Which coordinates appear to be the location point *G* on the coordinate grid?



- ⬭ (10, 7)
- ⬭ (7, 10)
- ⬭ (7, 3)
- ⬭ (3, 7)

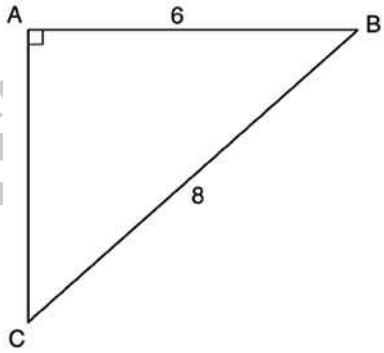
10. Which is another way to write the number 52 068?

- ⬭ 5 + 2 + 0 + 6 + 8
- ⬭ 50 000 + 200 + 60 + 8
- ⬭ 52 thousands, 6 tens, 8 ones
- ⬭ Five thousand two hundred and sixty-eight

11. Martha's pet ferret measures 42.27 centimetres long.
What is the length rounded to the nearest tenth of a centimetre?

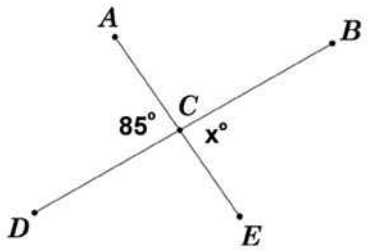
- ⬭ 42.0 centimetres
- ⬭ 42.1 centimetres
- ⬭ 42.2 centimetres
- ⬭ 42.3 centimetres

12. In Δ*ABC*, *AB* measures 6 centimetres and *BC* measures 8 centimetres.
What is the length of *AC*?



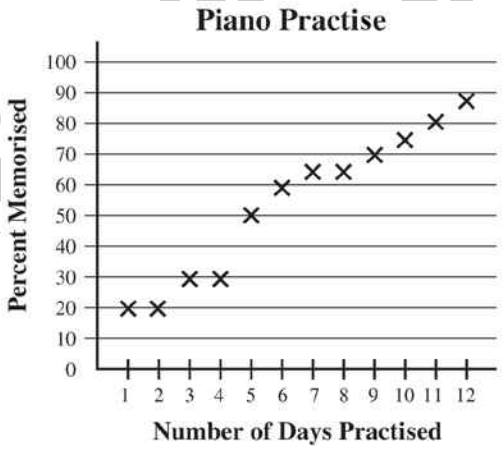
- ⬭ 1.41 cm
- ⬭ 2 cm
- ⬭ 5.29 cm
- ⬭ 10 cm

13. Given: *B, C* and *D* are collinear;
m∠ACD = 85º
What value of *x* will ensure that *A, C*, and *E* are also collinear?



- ⬭ 75
- ⬭ 85
- ⬭ 95
- ⬭ 105

14. Regina's piano teacher kept this record of Regina's progress on a song she is memorising.
How many days of practise did it take for Regina to memorise half of the song?

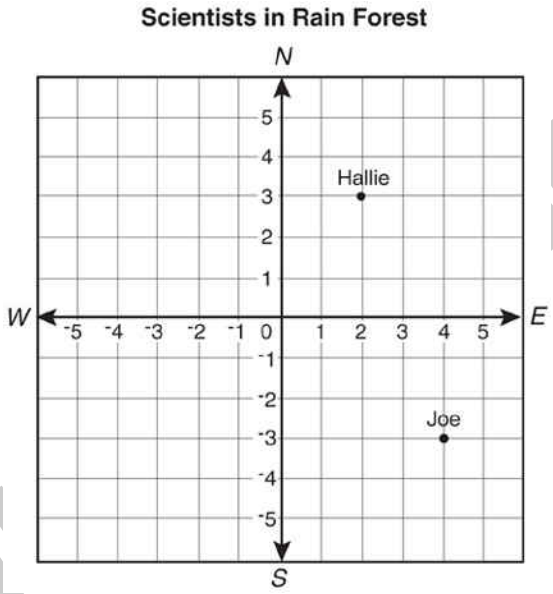


- ⬭ 4
- ⬭ 5
- ⬭ 6
- ⬭ 8

15. What is the value of the expression $3(2 - 4)^2 + 3$?

- ⬭ -33
- ⬭ -9
- ⬭ 15
- ⬭ 39

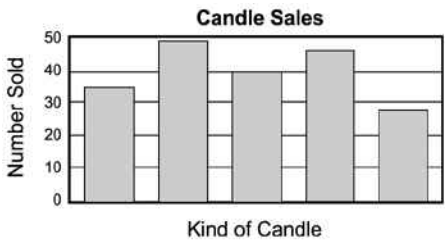
16. The map below shows the starting positions of two scientists studying plants in a rain forest.
Which ordered pair **BEST** names Joe's location?

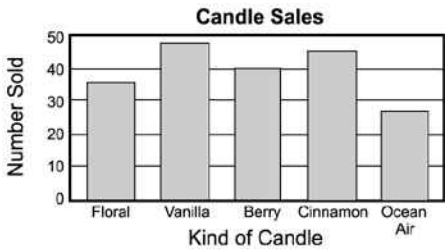


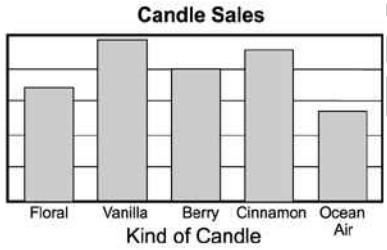
- ⬭ (3, -4)
- ⬭ (-3, 4)
- ⬭ (4, -3)
- ⬭ (-4, 3)

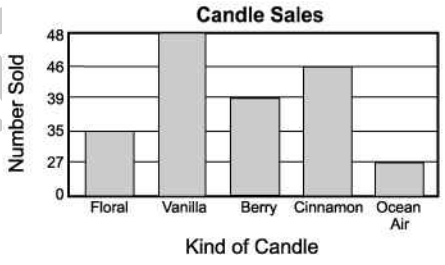
17. The table below shows the number of each kind of candle a shop sold on Saturday. Which of the following shows this information correctly graphed?

Candle Sales	
Kind of Candle	**Number Sold**
Floral	35
Vanilla	48
Berry	39
Cinnamon	46
Ocean Air	27









18. An Olympic-sized swimming pool is 50m long.
In order to swim 1km, how many laps would you have to swim?

- ⬭ 2 laps
- ⬭ 20 laps
- ⬭ 200 laps
- ⬭ 2000 laps

19. The students in Ms Romero's social studies class are preparing to learn about South American countries. The table below shows possible report topics.
Each student will select a country, a geographic feature to study, and a visual display.
How many different types of reports with one country, one feature, and one display can the students write?

Country	Geographic Feature	Visual Display
Columbia	Mountain	Map
Chile	River	Flag
Argentina	Lake	Currency
Brazil		

- ⬭ 80
- ⬭ 36
- ⬭ 10
- ⬭ 4

20. Kiri, Raina and their mother were eating a cake. Kiri ate $\frac{1}{2}$ of the cake, Raina ate $\frac{1}{4}$ of the cake and their mother ate $\frac{1}{8}$ of the cake.
How much of the cake was left?

- ⬭ $\frac{7}{8}$
- ⬭ $\frac{5}{8}$
- ⬭ $\frac{1}{8}$
- ⬭ none

21. Using the information in the graph below, which statement is the **BEST** conclusion that can be reached?

- ⬭ Prior to 1980, the average cost of a ticket was approximately $15.
- ⬭ The greatest rate of increase in the average cost of a ticket took place between 1983 and 1993.
- ⬭ The average cost of a ticket in 2003 was approximately $40.
- ⬭ The smallest rate of increase in the average cost of a ticket took place between 1993 and 2003.

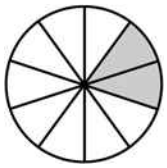
22. Joe had three test scores of 78, 76, and 74, while Mary had scores of 72, 82, and 74. How did Joe's average (mean) score compare with Mary's average (mean) score?

- ⬭ Joe's was 1 point higher.
- ⬭ Joe's was 1 point lower.
- ⬭ Both averages were the same.
- ⬭ Joe's was 2 points higher.
- ⬭ Joe's was 2 points lower.

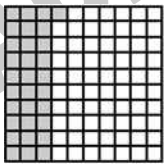
Use the following information to answer questions 23 to 25.

Complete the chart to show equivalence.

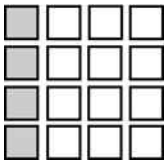
23.

Diagram	Fraction	Decimal	Percentage
	_____	0.2	_____

24.

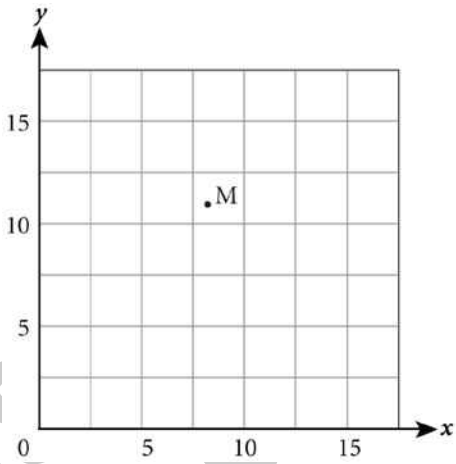
Diagram	Fraction	Decimal	Percentage
	$\frac{31}{100}$	_____	_____

25.

Diagram	Fraction	Decimal	Percentage
	_____	_____	25%

End of Section

26. Study the graph below.
Which coordinates are **MOST** likely Point M?

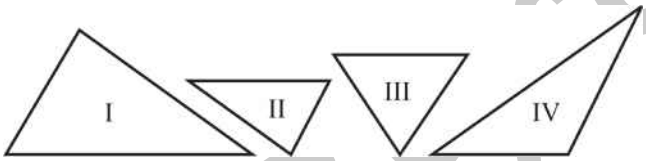


- ⬭ (8, 11)
- ⬭ (8, 8)
- ⬭ (11, 8)
- ⬭ (11, 11)

27. Choose the two fractions that are equivalent to $\frac{6}{8}$.

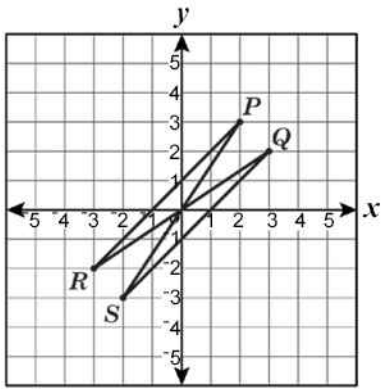
- ☐ $\frac{12}{16}$
- ☐ $\frac{1}{12}$
- ☐ $\frac{4}{10}$
- ☐ $\frac{3}{4}$
- ☐ $\frac{3}{9}$

28. Which two triangles are similar?



- ⬭ I and II
- ⬭ I and IV
- ⬭ II and III
- ⬭ II and IV
- ⬭ III and IV

29. Which line segment connects (2, 3) and (-3, -2)?



- ⬭ $\overline{PQ}$
- ⬭ $\overline{PR}$
- ⬭ $\overline{QS}$
- ⬭ $\overline{RS}$

30. City bus No. 14 arrives at Grand Street every 10 minutes, starting at 6:00 am.
The dispatcher is setting the schedule for an additional bus that will arrive at Grand Street every 20 minutes. The dispatcher does **NOT** want the two buses to arrive at Grand Street at the same time.

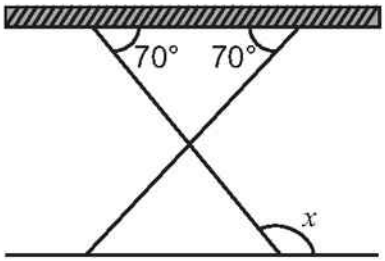
Which of these starting times will be **BEST** for the additional bus?

- ⬭ 6:00 am
- ⬭ 6:05 am
- ⬭ 6:10 am
- ⬭ 6:30 am

31. David earns $9.60 per hour for a 40-hour week.
What was his net pay for a week in which his total deductions were $84.30?

- ⬭ $93.90
- ⬭ $299.70
- ⬭ $315.70
- ⬭ $384.00

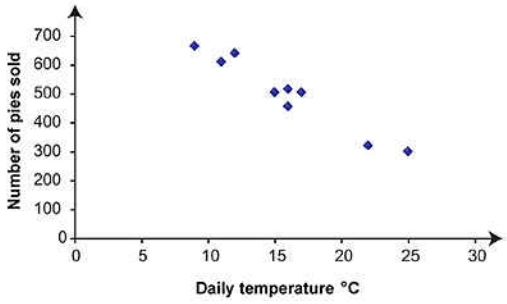
32. The diagram shows a table being constructed. The leg piece forms a 70º angle with the top of the table. The top of the table is parallel to the floor.
What is the value of *x*?



- ⬭ 40º
- ⬭ 70º
- ⬭ 110º
- ⬭ 140º

Use the following information to answer question33..

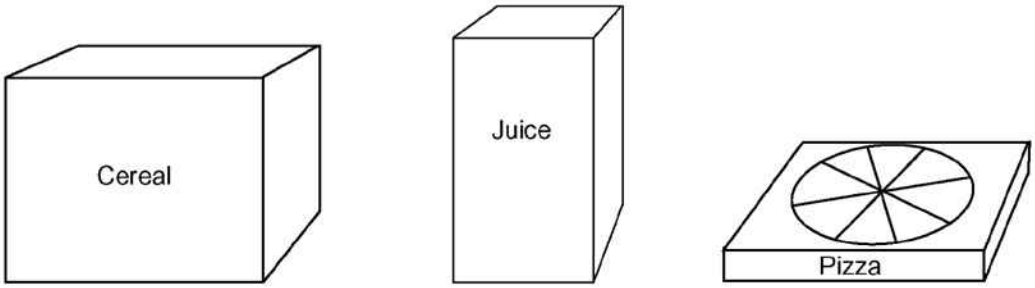
Maria recorded the daily temperature, and the number of pies sold on that day, and then plotted the points on a graph.



33. What could she conclude from this graph?

End of Section

34. What is the same about all of these boxes?
They all have six sides and



- ⬭ twelve edges.
- ⬭ twelve corners.
- ⬭ eight edges.
- ⬭ four corners.

35. The distance from Boston, Massachusetts to Princeton, New Jersey is approximately 418 kilometres.
What is the approximate distance in miles between Boston and Princeton?
(1 mile ≈ 1.609 kilometres)

- ⬭ 160 miles
- ⬭ 260 miles
- ⬭ 500 miles
- ⬭ 670 miles

36. The square root of 31 is between which two whole numbers?

- ⬭ 4 and 5
- ⬭ 5 and 6
- ⬭ 6 and 7
- ⬭ 7 and 8

37. A bag contains 8 blue, 3 red, and 6 white chips. Only red chips are added to the bag. How many red chips must be added to the bag for the probability of drawing a red chip to be $\frac{1}{3}$?

- ⬭ 2
- ⬭ 3
- ⬭ 4
- ⬭ 6

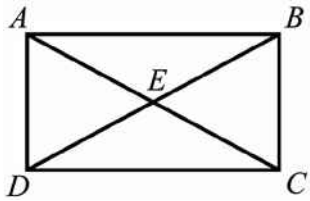
38. A package contains 7 bags of tortilla chips, 3 bags of cheese puffs, 4 bags of potato chips, and 6 bags of corn chips.
If Steve reaches into the package and selects one bag without looking, what is the probability he will choose potato chips?

- ⬭ $\frac{2}{20}$
- ⬭ $\frac{1}{5}$
- ⬭ $\frac{3}{10}$
- ⬭ $\frac{7}{20}$

39. One number is selected at random from the set of numbers below.
$.25,\ 1\frac{1}{2},\ 3.2,\ \frac{7}{8},\ \frac{9}{5}$
What is the probability that the number selected will be smaller than 1?

- ⬭ $\frac{2}{5}$
- ⬭ $\frac{3}{5}$
- ⬭ $\frac{3}{1}$
- ⬭ $\frac{2}{1}$

40. Figure $ABCD$ is a rectangle. $\overline{AC}$ and $\overline{BD}$ are diagonals.
$\overline{AC}$ = 25 metres and $\overline{BC}$ = 15 metres.
What is the length of DE?



- ⬭ 10 m
- ⬭ 12.5 m
- ⬭ 13.5 m
- ⬭ 15 m

41. If $x = 4$ and $y = 3$, then $xy - 2x =$

- ⬭ 4
- ⬭ 6
- ⬭ 19
- ⬭ 40

42. The stem-and-leaf plot shows the number of home runs hit per year by the leading hitter of the major leagues over a 10-year period.
What is the mode for the data?

Stem	Leaf
3	7, 8, 9
4	0, 4, 8, 8
5	6, 7, 8

- ⬭ 37
- ⬭ 44
- ⬭ 48
- ⬭ 58

43. Gary had a very heavy school bag. He wanted to investigate if his bag was a lot heavier than others at his school.

His best way to collect a sample of suitable data would be:

- ⬭ Weigh all the heavy school bags from the class.
- ⬭ Weigh all the heavy school bags from the school.
- ⬭ Weigh a random sample of school bags from the school.
- ⬭ Weigh a random sample of school bags from the class.

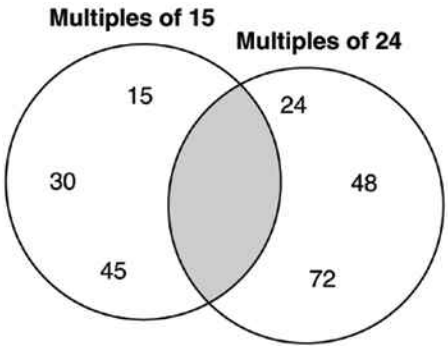
44. If $4 + 2(3x - 4) = 8$, then $3x - 4$ equals?

- ⬭ 4
- ⬭ 2
- ⬭ 8
- ⬭ 6

45. If a trip takes 4 hours at an average speed of 55 kilometres per hour, which of the following is closest to the time the same trip would take at an average speed of 65 kilometres per hour?

- ⬭ 3.0 hours
- ⬭ 3.4 hours
- ⬭ 3.8 hours
- ⬭ 4.1 hours

46. Sarah is filling numbers in the Venn diagram. No number is to be entered more than once.
What is the ***least*** number that can be appropriately placed in the shaded area of the diagram?



- ⬭ 360
- ⬭ 240
- ⬭ 120
- ⬭ 60

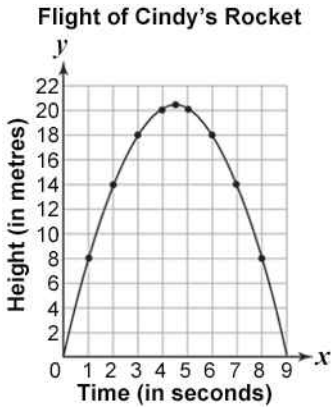
47. The solution of the equation $3x - 5 = 4x - 7$ is

- ⬭ 3
- ⬭ 2
- ⬭ -2
- ⬭ 4

48. In a coordinate plane, the points (2, 4) and (3, -1) are on a line.
Which of the following must be **TRUE**?

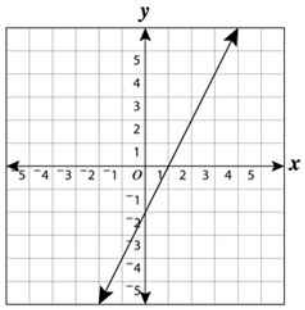
- ⬭ The line crosses the *x*-axis.
- ⬭ The line passes through (0, 0).
- ⬭ The line stays above the *x*-axis at all times.
- ⬭ The line rises from the lower left to the upper right.
- ⬭ The line is parallel to the *y*-axis.

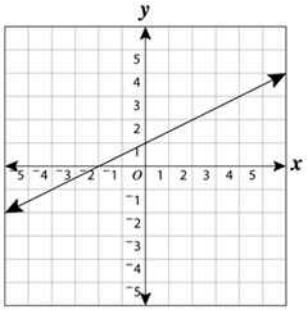
49. The graph below shows the height of Cindy's model rocket during the course of its flight.
Which of these equations can be used to find the height of the rocket at any time during its flight?

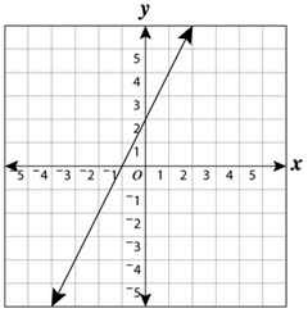


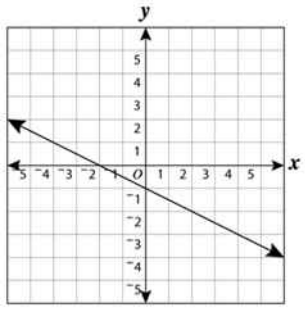
- ⬭ $y = 9x$
- ⬭ $y = x^2 - 81$
- ⬭ $y = -x^2 + 9x$
- ⬭ $y = 9 - 9x^2$

50. Which graph corresponds to $y = 2x - 2$?









51. If the pattern in the table continues, which of the following expressions represents a_n?

n	1	2	3	4	5	6
a_n	0	3	8	15	24	35

- ⬭ $2^n - 1$
- ⬭ $(n - 1)^2$
- ⬭ $3(n - 1)$
- ⬭ $n^2 - 1$