

## Percentiles

1) What is a percentile?

Scores on a quiz are as follows: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10.

2) What percentage of scores are 1 or lower?

6) What score lies at the 10<sup>th</sup> percentile?

3) What percentage of scores are 4 or lower?

7) What score lies at the 40<sup>th</sup> percentile?

4) What percentage of scores are 10 or lower?

8) What score lies at the 100<sup>th</sup> percentile?

5) A score of 4 lies at which percentile?

9) A score of 7 lies at which percentile?

A preschool teacher tests her students to see how high they can count. Students are given blocks and told to count. They count until they make a mistake. Their scores are as follows: 9, 10, 14, 15, 19, 20, 29, 49, 60, 100.

10) What percentage of scores are 14 or lower?

15) What score lies at the 10<sup>th</sup> percentile?

11) What percentage of scores are 20 or lower?

16) What score lies at the 20<sup>th</sup> percentile?

12) What percentage of scores are 30 or lower?

17) What score lies at the 50<sup>th</sup> percentile?

13) What percentage of scores are 49 or lower?

18) What score lies at the 80<sup>th</sup> percentile?

14) A score of 20 lies at which percentile?

19) A score of 100 lies at which percentile?

People are given a random number of M&Ms. The number each receives are: 7, 4, 1, 9, 2, 6, 8, 10, 3, 5.

20) How many people received 2 or fewer?

24) What number of M&Ms lies at the 20<sup>th</sup> percentile?

21) How many people received 5 or fewer?

25) What number of M&Ms lies at the 30<sup>th</sup> percentile?

22) How many people received 9 or fewer?

26) What number of M&Ms lies at the 70<sup>th</sup> percentile?

23) Getting 5 M&Ms lies at which percentile?

27) Getting 8 M&Ms lies at which percentile?

In a free throw challenge people shoot until they miss. The number of shots they make are listed below.

8, 19, 12, 16, 13, 15, 6, 17, 20, 11

28) What percentage of participants shoot 8 or fewer?

33) What score lies at the 10<sup>th</sup> percentile?

29) What percentage of participants shoot 13 or fewer?

34) What score lies at the 40<sup>th</sup> percentile?

30) What percentage of participants shoot 14 or fewer?

35) What score lies at the 50<sup>th</sup> percentile?

31) What percentage of participants shoot 17 or fewer?

36) What score lies at the 80<sup>th</sup> percentile?

32) A score of 12 lies at which percentile?

37) A score of 15 lies at which percentile?

Scores on a quiz are as follow: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

- |  |   |
|--|---|
| 38) What percentage of scores are 1 or lower?  | 42) What score lies at the 10 <sup>th</sup> percentile? |
| 39) What percentage of scores are 7 or lower?  | 43) What score lies at the 45 <sup>th</sup> percentile? |
| 40) What percentage of scores are 11 or lower? | 44) What score lies at the 75 <sup>th</sup> percentile? |
| 41) A score of 12 lies at which percentile?    | 45) A score of 19 lies at which percentile?             |

Students in a PE class do the following numbers of pushups:

24, 35, 21, 55, 44, 16, 33, 28, 51, 32, 49, 11, 38, 29, 41, 7, 50, 18, 45, 26

- |  |   |
|--|---|
| 46) What percentage do 21 or less?             | 50) What score lies at the 15 <sup>th</sup> percentile? |
| 47) What percentage do 33 or less?             | 51) What score lies at the 30 <sup>th</sup> percentile? |
| 48) What percentage do 34 or less?             | 52) What score lies at the 65 <sup>th</sup> percentile? |
| 49) What percentage do 48 or less?             | 53) What score lies at the 90 <sup>th</sup> percentile? |
| 50) Doing 38 pushups lies at which percentile? | 55) Doing 51 pushups lies at which percentile?          |

Scores on a quiz are as follows: 3, 5, 5, 6, 8, 8, 8, 9, 9, 10

- |   |   |
|---|---|
| 56) What percentage of scores are 1 or lower? | 60) What score lies at the 10 <sup>th</sup> percentile? |
| 57) What percentage of scores are 5 or lower? | 61) What score lies at the 20 <sup>th</sup> percentile? |
| 58) What percentage of scores are 6 or lower? | 62) What score lies at the 30 <sup>th</sup> percentile? |
| 59) A score of 3 lies at which percentile?    | 63) A score of 9 lies at which percentile?              |

A die is rolled several times. The outcomes are: 3, 5, 4, 5, 4, 2, 6, 2, 1, 3, 4, 6, 5, 3

- |  |  |
|--|--|
| 62) What percentage of rolls are 2 or lower? | 65) Which outcome lies at the 7 <sup>th</sup> percentile?  |
| 63) What percentage of rolls are 4 or lower? | 66) Which outcome lies at the 40 <sup>th</sup> percentile? |
| 64) A roll of 3 lies at which percentile?    | 67) A roll of 6 lies at which percentile?                  |

The heights of athletes on a team are given in inches: 76, 71, 68, 77, 71, 72, 78, 80, 76, 77, 81, 72, 73, 81, 77

- |   |   |
|---|---|
| 68) What percentage of heights are 74 or lower? | 69) Which height lies at the 20 <sup>th</sup> percentile? |
| 70) What percentage of heights are 80 or lower? | 71) Which height lies at the 53 <sup>rd</sup> percentile? |
| 72) A height of 74 lies at which percentile?    | 73) A height of 77 lies at which percentile?              |