Statistics & Probability | 3rd Quarter

WW 3

February 10 2021

Find the area under the normal curve in each of the following cases. **Show your complete solution**.

1. Between $z=0$ and $z=0.78$
2. Between $z=(-0.56)$ and $z=0$
3. Between $z=(-0.43)$ and $z=0.78$
4. Between $z=0.44$ and $z=1.5$
5. Between $z=(-2.76)$ and $z=1.55$
6. To the right of $z=(-2.85)$
7. To the right of $z=(-1.33)$
8. To the left of $z=0.35$
9. To the left of $z=1.85$
10. To the right of $z=0.3$
11. To the left of $z=(-2.76)$
12. To the right of $z=(-0.9)$

Find the indicated area under the normal curve, then convert it to percentage. **Show your complete solution**.

1. What percent of the area under the normal curve is between $z=1.03$ and $z=2.83$?

   $z=1.03=0.3485$
   $z=2.83=0.4977$
   $0.3485+0.4977=0.8462=84.62\%$

2. What percent of the area under the normal curve is between $z=(-2.43)$ and $z=(-1.1)$?

   $z=2.43=0.4925=49.25\%$
   $z=1.1=0.2643=26.43\%$

3. What percent of the area under the normal curve is between $z=(-2.1)$ and $z=2.1$?

   $z=2.1=0.4821=48.21\%$
   $48.21\%+48.21\%=96.42\%$

4. What percent of the area under the normal curve is between $z=(-1)$ and $z=1$?

   $z=1=0.3413=34.13\%$
   $34.13\%+34.13\%=68.26\%$

5. What percent of the area under the normal curve is between $z=0.85$ and $z=2.5$?

   $z=0.85=0.3023=30.23\%$
   $z=2.5=0.4938=49.38\%$
   $30.23\%+49.38\%=79.61\%$

6. What percent of the area under the normal curve is between $z=(-1.5)$ and $z=(-2.5)$?

   $z=1.5=0.4332=43.32\%$
   $z=2.5=0.4938=49.38\%$
   $43.32\%+49.38\%=92.7\%$

7. What percent of the area under the normal curve is between $z=0$ and $z=1.54$?

   $z=1.54=0.4382=43.82\%$

8. What percent of the area under the normal curve is between $z=0.5$ and $z=(-1.8)$?

   $z=0.5=0.1915=19.15\%$
   $z=1.8=0.4641=46.41\%$
   $19.15\%+46.41\%=65.56\%$